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LECTURES

LECTURES ON INTRACRANIAL SURGERY

III—REMOVAL OF THE GASSERIAN GANGLION

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ST LOUIS MO

The douloureux (prosopalgia, epileptiform neuralgia or Fothergill's neuralgia) usually is due to some disease of the trigeminal nerve in front of the ganglion of Gasser—frequently a low grade of neuritis, sometimes an atrophic process dependent upon an obliterative endarteritis of the vessels supplying the nerves Occasionally the disease may be traced to trouble in the alveolus, when it can be easily remedied but commonly no local cause can be discovered, internal medication proves useless and life becomes a burden o the sufferer Under such circumstances, removal of the ganglion is justifiable

Three methods of reaching the ganglion have been proposed

1 Opening the middle fossa through the temporal egion

2 Ablation of the superior maxilla and trephining the base of the skull,

3 Entering the cranium through the pterygoid region

Before discussing these methods it is well to recall he *anatomic relations of the ganglion* The fifth or rifacial nerve arises by two roots a small anterior or motor nerve for the muscles of mastication and a arge posterior root which constitutes the great sensory nerve of the face, giving origin to the ophthalmic nd superior maxillary nerves (both nerves of sensa-n only), and supplying the inferior maxillary with sensory fibers, these two roots do not join imme-*ely after* leaving the pons Varolii, but pass side side, forward to an oval opening in the dura on upper border of the petrous bone and thence be-n the bone and dura to the apex of the petrous ere is formed the semilunar or Gasserian ganglion on the sensory root, the motor fibers passing be-eath the ganglion to join the third (inferior maxil-ry) division just outside the skull In its passage ader the *ganglion this motor* root is accompanied y the superficial petrosal nerve The ganglion itself intimately adherent upon its upper surface to the ura, which is here divided into *two layers to cover* e ganglion, and hence is difficult of removal From s *anterior border there* proceed

1 The ophthalmic division which continues forward along the outer wall of the cavernous sinus, naking its exit through the sphenoidal fissure as hree distinct nerves to supply the orbit and upper art of the face, just after leaving the ganglion it ceives its communicating filaments from the cavern-s plexus of the sympathetic—a most important rgical point, *as otherwise there* would be inevitable destruction of the eyeball after removal or destruction of the ganglion

2 The superior maxillary division which passes out *of the cranium through the foramen rotundum to be* distributed to the middle portion of the face in numerous branches

3 From the lower angle the sensory part of the inferior maxillary which *leaves the* cranium by the foramen ovale and joins the motor root, immediately afterward it divides into two large trunks (anterior and posterior) the various divisions of which give sensation to the lower part of the face and the mouth, the posterior or larger trunk gives rise to the auriculo temporal, the lingual and the inferior dental—the latter especially of interest, as it *must* be the guide to the foramen ovale—hence it must be remembered as lying beneath the external pterygoid in its upper relations, but later between the internal lateral ligament and the *ramus of the jaw, finally* entering the dental foramen

It may thus be seen *that the* ganglion lies in an almost inaccessible location, surrounded by vital structures and contiguous to the great vessels at the base of the brain What is the best route to follow?

Victor Horsley practiced the first mentioned method in a case that died seven hours after operation, presumably from shock He opened the skull in the temporal region, low down, incised the dura and lifted up the tempero sphenoidal lobe so as to see the base of the skull in the middle fossa illumination being secured by *means of a small* incandescent light, he then cut the root of the nerve near where it emerged from the pons, followed it through the dura and removed the ganglion from above *From a* number of experiments upon the cadaver I am convinced that this is an operation of great difficulty as well as severity Unless a large portion of bone be removed it is impossible to reach the root of the nerve behind the ganglion, or even the ganglion itself In every attempt made there was so *much* compression of the brain in exposing the point of attack that I believed much harm might result in the living subject—at least in hands less skilled than Mr Horsley's And it appears to me that there is great danger of hemorrhage from the contiguous sinus or artery, to which point I will refer later

The second method has been followed by Mr Rose, of London, with success in one case But while by excision of the superior maxilla upon one side the foramen ovale may be quite readily reached, the disk of bone removed and the ganglion destroyed, the mutilation is too great to justify the procedure provided any other route can be utilized

The third plan—known as the Rose operation—has proved, experimentally, to be *decidedly the best* And the results in actual work have thus far been entirely satisfactory Rose of London, Andrews of Chicago, myself, Park of Buffalo, and Parkhill of

Denver have, in the order named, operated successfully, and lately a number of other operators have recorded brilliant results, bringing the cases up to the neighborhood of twenty with only one failure

In this operation two things must be especially remembered the ganglion lying just above and external to the internal carotid artery, by the slipping of an instrument fatal hemorrhage may occur, an assistant should therefore stand ready to tie the common carotid upon the same side in case of accident while the operator prevents bleeding by gauze pressure Second, since division of the fifth nerve (or its branches) *just in front of the ganglion* is said to give rise to destruction of the parts supplied by it and subsequent death, the ganglion must be totally extirpated without traction from the front, or the nerve must be cut *behind* the ganglion

THE ROSE OPERATION

The instruments required are one scalpel of medium size, two scissors, one large, one small, half inch trephine with a long handle, one periosteal elevator, Hey's saw, bone drill and silver wire, dissecting forceps, one small curette (Volkmann's sharp spoon), two hooks to catch the nerve-blunt, one Liston bone forceps, twelve hemostatics All should be metal so as to permit boiling Last needles and sterilized catgut

After the usual preparation by bath, catharsis, etc, *the head and face are carefully shaved*, the parts thoroughly scrubbed with soap and water, dried and washed with sulphuric ether The eye upon the affected side is irrigated with bichlorid solution, 1 to 3000, and the lids stitched together with fine catgut, the ear is cleansed and packed with a little gauze At this point the hands of the operator and his two assistants must be again thoroughly scrubbed the nails cleaned, and sterilization effected by washing the hands and forearms in saturated solution of potassium permanganate until a deep brown, decolorizing with strong solution of oxalic acid and final rinsing in sublimate solution 1 to 1000 The field of operation is again washed with antiseptic soap and water and then with the bichlorid solution, and the surrounding parts covered with towels wrung out of hot bichlorid solution

Beginning just below the outer angular process of the frontal bone, an incision is made along the upper border of the zygoma to its posterior extremity, and curving sharply downward, descends just in front of the ear and over the parotid to the angle of the jaw, thence along the horizontal ramus to the vicinity of the facial vessels This flap of skin is dissected up, care being taken not to injure Steno's duct and the facial nerve By making the incision in this manner there is gained a maximum of space with a minimum of disfigurement and no paralysis of the portio dura A long silk ligature is passed through the flap and held by an assistant, the retracted flap being wrapped in bichlorid gauze for protection The periosteum is now stripped from the zygoma and four holes drilled through the bone, two through the zygomatic process of the malar, and two close to the root of the zygoma these drill holes should be about one-third of an inch apart and are to provide passage for silver wires to hold the parts in place after trephining With the Hey's saw the zygoma is divided between the holes at either end, the anterior saw cut being directed obliquely downward and forward, the posterior one as far back as possible The bone is turned down with the masseter muscle attached, care being taken not to injure the muscular attachment on the inner surface, as future nutrition of the bone must for a time come through the muscle The coronoid process of the inferior maxilla being thus exposed it may be cut away with the Liston bone forceps or the saw, the bone removed should be thrown away after separating from the temporal muscle, as no attempt is made to restore it to its position because atrophy and cicatricial contraction would interfere with movements of mastication The temporal muscle is now turned up out of the way, exposing the pterygoids The external pterygoid muscle is separated from the skull by the periosteal elevator and drawn downward Search is made for the third division of the fifth nerve (the inferior maxillary) as it is the guide to the foramen ovale through which it makes its exit When this can not be found dependence must be placed upon the bony landmarks, an assistant wholly unconnected with the operation should be at hand with a skull which can be carefully observed and corresponding points located upon the patient It should be remembered that the foramen ovale lies about one-fourth of an inch anterior to and the same distance internal to the foramen spinosum through which passes the middle meningeal artery, and a little more than a half inch behind and a trifle external to the foramen rotundum, so that any of these foramina is *a guide to the others*, further, the fossa for the ganglion lies about five-sixteenths of an inch internal to and slightly behind the foramen ovale, the carotid canal being the same distance from the foramen, directly toward the median line

The situation of the foramen ovale having been determined, a half inch trephine with a long handle is introduced with the center-pin a little behind and external to the foramen When the disk of bone is removed the hemorrhage must be checked by pressure for a moment, and the cavity cleaned from all blood, when the dura can be cut with scissors A small incandescent light is now almost indispensable, by its aid a part of the ganglion can be seen A small blunt hook is introduced, the nerve caught just where it *enters* the ganglion and strong traction made, when well in the opening it may be divided with small scissors and the ganglion torn out with dissecting forceps or a small curette Hemorrhage is now quite severe but must not agitate the operator, it can be controlled by pressure or the application of a bichlorid gauze compress wrung from water of a temperature of 120 degrees Bleeding having been arrested the wound is irrigated with hot sterilized water (or carbolic solution 1 to 40), the temporal *muscle is tucked into the fossa and the zygoma* replaced and wired As no drainage can be employed the wound is now made as dry as possible, iodoform dusted in very freely, the incision rapidly closed with a continuous catgut suture, the face washed, the wound hidden in iodoform and much sublimate gauze applied The head and affected side of the face must be covered with several layers of bichlorid gauze (1 to 2000), enveloped in cotton and bandaged tightly

The most strict attention to even the minutest detail of asepsis is necessary at every step of the operation There must be no break in the chain of ideal surgical cleanliness, regardless of any exciting incident which may arise

Both eyes must be bandaged for four days and the on the affected side for two weeks The catgut ch in the lids is removed at the completion of the ration

AFTER TREATMENT

hen put in bed the usual methods to combat ck must be instituted Whenever much restless s appears with the reaction, the hypodermatic in ion of morphin (gr 02) is indicated Absolute et must be enjoined and vomiting prevented if sible After the subsidence of nausea—probably twenty four to thirty six hours—a liquid diet uld be ordered and kept up for at least two weeks he end of which time articles easily masticated be substituted

bout the sixth day the patient may be allowed to up and on the twelfth or fourteenth to go about house

(as is frequently the case) the subject has uired the morphin habit it is best to stop the g at the time of operation surprisingly little discomfort will result the disappearance of the pain ng partial relief from the craving The hypoder ic injection of 005 doses of strychnin, three our times daily for a few days will greatly lessen desire for the drug

CASES

hat removal of the ganglion of Gasser does give manent relief from the terrible pain is proved by following case

mes S, of Chanute Kan age 54 came to me for exam ion in March, 1892 The family history and previous th were good, he was of strong constitution and non ulitic Eighteen years ago he began to have paroxysms ain in the right side of his face the pain was thought e neuralgic, and one by one all his teeth were extracted, phin was used for the pain but gave no relief even in s of a grain and was finally discontinued During the years preceding examination the local spasms had in sed in frequency and severity until existence seemed earable and the patient had contemplated suicide to end nisery All the coal tar derivatives and other anodynes been tried in vain His appetite had been poor for e months and as attempts at chewing caused recurrence ain, he had for a long time been confined to his bed, cipally on account of weakness He was admitted to Saints Hospital, of Kansas City, March 18 1892 At that the following entry was made Status præsens—ent pale and anemic emaciated, lines of pain upon, heart, lungs and abdominal organs normal, no disease ar, eye, nose or throat, no trouble in antrum (examina by electric light in mouth) nor alveolus to account for, while talking paroxysms came on—typical trigeminal Put to bed and ordered forced feeding and

℞ Quininæ hydrobromat	1 5
Ferri sulphat exsiccat	1
Hyoscyaminæ sulphat	01

Misce et ft capsul No xxi Sig One every four hours"

ere was no improvement under this, so far as concerned, but the general condition was slightly better on March On March 29 I made Rose's operation being assisted by J D Griffith and J F Binnie, of Kansas City The d division of the nerve could not be found on cutting y the pterygoids, so the location of the foramen ovale determined by comparison with the dry skull The hine was applied a little too far behind the foramen so it cut into the foramen spinosum, wounding the middle ingeal artery, the bleeding was very severe for a mo t, and it seemed as if the carotid would have to be tied, as been advised for such an accident but by persistence vessel was secured, no further difficulty was experi ed except that the patient seemed ready to die from a bination of weakness, anesthetic and shock so the ope on was hurried and completed in fifty five minutes An l convalescence followed The shock was easily over e, the temperature rose to 100 5 degrees on the day fol ng operation, but rapidly declined—pure surgical fever, dom from pain was complete, there was little nausea, the appetite speedily improved There was a gain of ten pounds in weight in two weeks The wound healed by primary union He was discharged from the hospital April 12, 1892

Here was a typical case for operation And the result has justified the apparent severity of the remedy For nearly three years have now passed since the operation, and there has been no return of the pain The severe conjunctivitis which followed and which at one time I feared might destroy the eye finally disappeared, though for several months the eye had to be protected Considerable difficulty in mastication was at first experienced from the stiffness of the jaw and from accumulation of food upon the insensitive side of the mouth, but the man finally learned to overcome this and at the present time has no trouble whatever

Was the ganglion destroyed in this case, or was the good result due simply to cutting the nerve outside the skull? Senn and others have insisted that it is impossible to remove the ganglion by this route and that the benefits arise simply from division of the second and third branches of the fifth nerve during the attempts at removal Whether it is taken away in its entirety or only partially destroyed, or whether it is not even touched during this operation, are questions of more theoretical than practical interest, so long as the results are as satisfactory as in this case relief from pain which renders life a burden But that cure depends not upon section of the nerve instead of removal of the ganglion is certainly to be inferred from comparison of the history just given with that of the following case

Mrs Jacob M, of Hope Kan, I saw in consultation with Dr J N Ketchersid on July 21 1893, at her home She was 48 years of age Her general health and family history good For four or five years there has been persistent severe neuralgia of unknown cause which affected the third division of the fifth nerve Several sections had given temporary relief—the last being of the nerve just as it enters the dental canal For the past six weeks prior to my first visit almost intolerable pain had continued, morphin, etc, affording little relief For five days she had not tasted food as every movement caused a return of the paroxysmal agonizing pain With the assistance of Drs Ketchersid and Miles I began the Rose operation but upon reaching the point of trephining the base of the skull my courage failed, for the operation was in a private house and the light not good I therefore simply cut the nerve at its exit from the foramen and removed much of it completing the operation in the usual manner July 22 she was resting nicely without pain, and had slept all night for the first time in many months July 25 Dr K wrote "Patient's temperature this morning normal pulse 85 She is doing well and gaining rapidly in strength" Convalescence was satisfactory in every detail *For a little more than one year there was complete relief* from pain, but at the end of that time little twinges began to be noticed and these have gradually increased in severity until recently the paroxysms have assumed great intensity and the doctor has been in correspondence with me about removing the ganglion from above

Dr Frank Hartley, of New York, has described a modification of Horsley's operation, the steps consisting in reflecting the tissues (including the bone) over the temple, the base of the initial curved incision being over the zygoma and the flap reflected downward, the dura is gently pushed away from the bone by means of a spatula until the foramen rotundum and foramen ovale are exposed, without opening the dura except where it divides to inclose the ganglion The nerve is then cut behind the ganglion and the latter torn from its depression with dissecting forceps from above Theoretically and experimentally upon the cadaver this operation is a good one, and Dr McLane Tiffany of Baltimore has operated successfully four times with good results, but I have the same objections as to the Horsley method too much brain compression and danger of hemorrhage That these objections are not based upon visionary reasons is proved by the following case

Mrs W, 65 years of age, married, was operated on Oct 23, 1893, by Dr J D Griffith, of Kansas City, assisted by Dr J F Binnie and myself All went well until the attempt to raise the dura to expose the ganglion Serious symptoms depressed heart's action and irregular respiration then arose—necessitating repeated interruptions Finally the petrous bone was well uncovered, but the bleeding was so excessive by the time the region of the ganglion was reached as to compel cessation of operation and the application of gauze pressure After repeated efforts we were compelled to desist, tamponing the wound with iodoform gauze to prevent death from hemorrhage Four days later the wound was unpacked and a second unsuccessful attempt made to remove the ganglion, during which the dura was penetrated Again recourse to the gauze tampon was necessary to save life temporarily The patient died three days later as a result of meningitis

Now Dr Griffith is one of the most careful surgeons in this country and I am sure no other operator could have accomplished what he failed to do in this particular case, and I feel equally certain that had the Rose method been adopted the ending might have been more favorable

As a result of observation, therefore, as well as experimentation, I am compelled to say that the Rose operation for removal of the Gasserian ganglion appears to me to be the one easiest of execution and safest in practice

ORIGINAL ARTICLES

A REPORT OF FOUR ILLUSTRATIVE ABDOMINAL SECTIONS

Read by title before the Southern Surgical and Gynecological Association November, 1894

BY L S McMURTRY, M D

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Clinical reports possess a peculiar value to practitioners of medicine as attesting the absolute results of treatment The four cases here reported illustrate as many distinct and separate conditions of disease, in which none other than radical surgical treatment can avail These cases occurred in my practice during one week, the four operations having been performed within six days In all the cases the indications for operation were absolute and urgent, they passed into easy convalescence without untoward symptoms of any kind, and have made complete and perfect recovery In Case 4 the operation was followed by pronounced shock, from which the patient rallied in a few hours All are now in the enjoyment of perfect health three months after operation

The object of this report is to illustrate the indications for operation in grave conditions of disease formerly imperfectly understood, and to demonstrate the safety of operative treatment, promptly and thoroughly applied The profession has been slow to accept the practical truth that the risk of operating in such cases as I will report is incomparably less than that of temporizing by treating symptoms Among the increased risks to life from delay, the feeble condition of the patient and the complications resulting from rapid tissue changes demand recognition For convenience I will report the cases in reverse order, beginning with the last case of the group

Case 1—Extra-Uterine Pregnancy, Rupture, Hemorrhage and Shock Mrs D, aged 25, on the evening of September 23, while undressing to retire, was attacked by sudden pain in the left iliac region It did not last long and was relieved by rest and warm applications This lady had been married six years, and about two years since suffered a miscarriage with considerable hemorrhage, since that time she had complained of pelvic pain and menstrual irregularity At the time mentioned she had missed two menstrual periods On the Wednesday night following she was attacked with violent pain in the same region, much more violent than before, and was given a full dose of morphia hypodermically which gave her some relief On the following morning she got up to empty the bladder and while doing so fainted, became deathly pale and cold and was seized with nausea and vomiting The pain was intense and for several hours she exhibited the symptoms of profound shock and internal hemorrhage—pallor, bloodless lips, surface cold, and pulse rapid, small and feeble Under the influence of stimulants freely administered, hot applications to extremities, mustard to epigastrium, and atropia hypodermically, she gradually rallied late in the afternoon On the following day her abdomen was swollen and tympanitic, and very sensitive to the touch Three days afterward she passed a perfect cast of the uterine cavity Her pulse ranged about 120, and she had an evening temperature of 101

This description of her symptoms is a literal extract from a letter written me at the time by her father, himself an experienced practitioner of medicine Three days later her father wrote that her symptoms were materially improved The pulse had fallen to about 100, the temperature had come down to normal and her condition was better in every respect Still the abdomen was considerably swollen and quite tender in the left iliac region There was a slight bloody flow from the uterus These symptoms it will be observed, correspond with the shutting off of the area of rupture and hemorrhage from the general peritoneum, with arrest of bleeding temporarily by blood clot On Thursday, October 11, she was transported in a carriage to the railroad station, placed in a sleeping car, and brought to the Jennie Casseday Infirmary for Women in Louisville She bore the journey well; and reached the infirmary without aggravation of symptoms She was accompanied by her father and husband, both of whom are physicians An examination of the pelvis demonstrated that the cavity was choked with effusion The uterus was pushed to the right, and Douglas' pouch and the left lateral space packed

Saturday morning, October 13, I opened the abdomen and found the pelvic peritoneum filled with blood clot, which was breaking down, peritonitis was active and progressive After removing two or three pints of blood clot, I brought up into the incision the left uterine appendage, and tied it off close to the uterus The point where the tube ruptured is very plainly seen An examination of the uterine appendage on the opposite side demonstrated the existence of chronic salpingitis with adhesions and occlusion of the tube, evidently the result of long standing chronic inflammation It was removed The peritoneal cavity was flushed with several gallons of warm distilled water, a drainage tube placed, the incision closed, and the patient returned to bed Her convalescence was uninterrupted Her pulse remained under 100, she suffered no pain, the abdomen remained flat, the bowels were moved on the third day in response to an enema, the drainage ceased by the third day, the tube was removed, and convalescence was established without any interruption whatever. She returned home quite well at the end of the fourth week Drs Coleman Rogers, Mandeville Thum, and Robert Stuart were present at the operation

2—*Cholelithiasis Impaction of Cystic Duct, Chole my* Mrs B of Uniontown Ky was brought to me Norman, a well known physician of that place, on sday Oct 10 1894 She is 52 years of age, of vig- onstitution, and until three years ago enjoyed uni- good health For three years past she has suffered requent violent paroxysms of abdominal pain only ectly relieved by large doses of opiates Her diges as impaired she was several times jaundiced and for l months past her suffering was almost constant She en treated by different physicians for various sup conditions of disease Dr Norman some months ago ed a globular tumor in the right hypochondrium which nlarged steadily An examination of the tumor gave sive evidence that it was an enlarged gall bladder ith associated history justified a diagnosis of gall most probably impacted in the cystic or common

ursday morning October 11 the day after the pa- s arrival at the infirmary, I did cholecystotomy tical incision about three and a half inches long made immediately over the tumor firm adhe were encountered all about the distended gall er These were carefully separated and the bladder brought up into the incision A flat e was packed underneath so as to protect the

oneum and the gall bladder instead The gall der was filled by a perfectly clear fluid, a mucoid tion characterizing this form of biliary obstruc-

After emptying this, my finger detected a large e firmly impacted deep in the cystic duct I expe- ed considerable difficulty in removing it It is known that the walls of the gall bladder and its s are thin and friable, and hence the utmost acy of manipulation must be observed when the is stretched by an impacted stone It is very easy ush it through the thin tissue of the duct Vari- forceps have been invented for the removal of es under these circumstances, some with padded es for crushing the stone from the outside of the

With two fingers introduced within the abdo and the index finger of the other hand within gall bladder, I succeeded in dislodging this large e without injury to the duct, and removed it

The further steps of the operation consisted in sewing the incised gall bladder to the parietal peritoneum of the incision, introducing a rubber tube into the gall bladder and closing the incision, (except at the central point where the tube was placed) in the usual manner In this way the gall bladder is drained through the abdominal wall, Before the operation was concluded bile began pouring out through the gall bladder The patient's convalescence was smooth and uninterrupted, being entirely afebrile and requiring no opium or other anodyne The tube remained in the gall bladder until the discharge ceased and the bile followed the normal channel The opening closed altogether during the fifth week The patient was entirely and immediately relieved of pain and is now quite restored to vigorous health

Case 3—Suppurative Salpingitis and Peritonitis—L I age 25 referred by Dr P I Barbour, had suffered for several months from pelvic inflammation The history and symptoms leave no doubt as to the infection being due to gonorrhea For seven weeks prior to admission to the infirmary she was very ill with peritonitis The abdomen was tender and tympanitic *pulse rapid and temperature ranging from* 101 to 104 degrees F The suppurative stage was marked by rigors and profuse sweating Pain was paroxysmal and so severe *that morphia was daily and freely used*

An examination revealed the characteristic symptoms of suppurative salpingitis and pelvic *peritonitis* After free purgation, abdominal section was done October 9 The pelvic viscera were matted down with adhesive exudate, which being separated allowed pus to flow out of the incision The Fallopian tubes were distended with pus, the left having ruptured The tubes were glued to the ovary on each side and both ovaries had been converted into abscess sacs The specimens illustrate the extreme ravages of specific suppurative salpingitis and ovaritis After thorough enucleation the rotten appendages were tied off close to the uterus The peritoneum was flushed freely with warm water, a glass drainage tube placed, and the incision closed The progress of the case was uninterrupted, and convalescence was prompt Neither morphia or other opiates were given during convalescence At the expiration of the third week the patient went to the country and writes that she is quite well Drs Barbour and Rogers, of this city, and Drs Stuart and Dunn of Henderson, were present at the operation

Case 4—Post puerperal Pelvic Inflammation, with Suppuration—Age of patient 21 years, confined July 26, 1894, and during convalescence developed peritonitis After an acute illness of several weeks during which time she exhibited the symptoms of puerperal peritonitis, the inflammatory process seemed to abate and her condition was hopeful During the latter part of August her condition was complicated by abscess of the breast which required incision and gave much distress at the same time adding to the exhaustion of an already enfeebled condition I saw the patient in the latter part of September in consultation with the family physician, Dr Coleman Rogers For several weeks preceding the condition was one of seeming improvement with recurrent attacks of violent pain necessitating repeated doses of morphin, accompanied with fever and sweats These exacerbations undoubtedly marked the invasion of additional areas of peritoneum by the inflammatory process Dr Rogers had utilized purgatives, as well as all other non surgical resources in the treatment, and requested a consultation with a view to operative interference An examination disclosed the most extreme and advanced lesions of post puerperal pelvic inflammation The uterus was *bound down* upon the floor of the pelvis, the fundus in Douglas' pouch and the rectum almost occluded by its pressure All the pelvic viscera were fixed being *bound by extensive* deposits of organized exudate There was an indistinct sense of fluctuation in the lateral pelvic spaces when the bimanual touch was applied The patient was pale, feeble and emaciated, racked with daily exacerbations of pain and constant fever

On Oct 6, 1894, during the eleventh week of illness, the patient was removed to the infirmary and on the following morning abdominal section was made Ether was very cautiously given, and the operation performed as quickly as thorough and careful work would permit On opening the abdomen (suprapubic) the omentum was found agglutinated to the intestines, roofing in the pelvic viscera Releasing this and working a track of cleavage with two fingers through the coils of intestines the pus freely poured out of the incision In separating the adhesions at the floor of the pelvis, and enucleating the disintegrated tubes and ovaries (applying only gentle force cautiously), my index finger penetrated the uterus Recognizing this, I forcibly released that organ (observing the utmost care not to open the rectum to which it was adherent), and brought it up with the suppurating appendages The body of the uterus was friable, breaking down under slight force, the appendages were mere abscess sacs Having separated adhesions so as to release the intestines, I threw a small wire attached to Kœberle's nœud around the cervix uteri, and removed the uterus and appendages The peritoneum was thoroughly douched with several gallons of warm water, a drainage tube placed, and the incision rapidly closed The operation was completed in thirty-two minutes Dr Guest, the anesthetist, had already administered stimulants hypodermically The patient was put to bed without any pulse that we could detect in the wrist, though the heart was acting with great rapidity The usual stimulants subcutaneously, with dry heat to the surface and extremities, were persistently applied, and the patient gradually rallied The pulse was rapid and small for three days, then gradually improved The drainage tube was removed on third day, the nœud came away on the eleventh day, and healing was prompt and complete The patient rapidly gained strength and flesh, and is now a perfect picture of health Dr Coleman Rogers and Dr T P Satterwhite were present at the operation

THE OPEN AIR TREATMENT OF CONSUMPTIVES WHO CAN NOT SEEK CHANGE OF CLIMATE

Read at the meeting of the "Tri State ' Medical Society at St Louis, April 2, 1895

BY ROBERT H BABCOCK, A M , M D

PROFESSOR OF CLINICAL MEDICINE AND DISEASES OF THE CHEST COLLEGE OF PHYSICIANS AND SURGEONS CHICAGO ATTENDING PHYSICIAN COOK COUNTY HOSPITAL

The importance of climatotherapy in the treatment of consumption was recognized even by the ancients As long ago as the time of Hippocrates and his immediate successors it was held that consumptives should be removed to a distance from the locality in which they had contracted their disease From that day to this, physicians have been in the habit of ordering change of climate for their phthisical patients in the belief that in a judicious and early employment of climatotherapy lies the consumptive's best hope of recovery Much thought and investigation have been given to the determination of those qualities of climate to which its remedial virtues may be attributed These would seem to be dryness, high altitude, equability and purity Yet that dryness and high elevation are not fundamental requirements for all cases, is shown by the fact that some patients do well in sea stations such as the Island of Madeira Equability of temperature can not always be relied on at resorts of greatest repute, such as those of mountain climates The one quality common to all well known and justly celebrated resorts is purity of the atmosphere, and when combined with dryness and low atmospheric pressure, of mountain resorts, we have those qualities most conducive to recovery from pulmonary tuberculosis Nevertheless, some patients recover who never seek a high altitude, others, who never leave home And those who seek the most favorable climate possible receive little or no benefit unless they remain out of doors a large proportion of the time Furthermore, Dettweiler, from his Sanitarium at Falkenstein, Germany, reports from 24 5 to 27 per cent of recoveries of patients in all stages And yet his institution is located in the cool, damp, changeable climate of Germany in the Rhine country Similar results are achieved at Bremer's Sanitarium in the equally unfavorable climate of Gorbersdorf, North Germany Surely then, there must be something more than mere removal to a favorable climate if the consumptive would recover, and on the other hand there may be some hope for the consumptive who can not seek change of climate This condition upon which depends the welfare of the phthisical patient, whether at home or at a health resort, is life in the open air

Consumption may be said to be the disease of indoor life Its victims are those forced by occupation or circumstances to spend their days within four walls It rarely attacks persons who work in the open air, unless their health be undermined by vicious habits or conditions of environment that antagonize the beneficial effect of their outdoor life While penning the foregoing sentences I was consulted by a lady of tubercular family history, who had developed pulmonary disease within a few weeks previous, largely I believe in consequence of having exchanged residence in South Dakota with much time spent out of doors, for the opposite conditions of life in Chicago Such facts are so numerous as to point unmistakably to the disastrous consequences of indoor confinement Why then should this, Nature's remedy, fresh air, be withheld from individuals already suffering from pulmonary tuberculosis? And yet this is precisely what is done in only too many instances

Last fall I was consulted by a young lady with pronounced pulmonary tuberculosis, whose physician had warned her against going out doors, lest she should take cold It is not at all uncommon to find the consumptive in an advanced stage with all the phenomena of sepsis, lying in an overheated, ill-ventilated apartment from which he is never moved

Therefore I desire to lay down two following propositions 1, a consumptive who can not seek change of climate should pass his days in the open air, no matter what the stage of his disease, 2, under proper precautions this may be done in all weathers, excepting the severe cold of winter, when the thermometer registers below 15 degrees above zero

And now I propose to devote the remainder of this paper to the description of how and why this should be done

In the summer of 1893 it was my good fortune to be able to visit Dettweiler's famous Sanitarium at Falkenstein, where the open air treatment of consumptives is carried out in its perfection and with truly brilliant results The institution is situated at the altitude of about one thousand three hundred and fifty feet above the sea, and is protected from cold northerly winds by the low Taunus Mountains, among which it lies It is constructed around three sides of a square, so that its galleries face the southeast, and obtain all the sunshine possible In these open galleries, protected from the elements only by canvas curtains, the patients spend the entire day from eight to ten hours, reclining in easy chairs or on couches and covered by sufficient rugs to withstand the cold This open air treatment is so generally employed, that according to Dettweiler's figures all but 8½ to 9¼ per cent of the patients were submitted to it, winter and summer, during the year in which his statistics were collected The patients are taken into the fresh air about 11 o'clock A M, after they have had their breakfast and as a rule are not brought in again until 9 or 10 o'clock in the evening Their meals are served out of doors and they while away their time by conversation, reading, playing games, etc The range of winter temperature during which Dettweiler reports this treatment as carried out was between 12 and 41 degrees above zero, F and it was not deviated from because of rain, wind or snow, since the patients could be sufficiently protected by the canvas curtains Very feeble patients are taken out and kept in their beds those suffering from high fever are kept in the open air until daily defervescence sets in, when they are returned to their rooms The small percentage of those not subjected to this treatment were invalids suffering temporarily from complications

Marked benefit is said to be observed, such as diminution of fever, cough and expectoration, cessation of sweating, lessened nervousness, return of appetite and digestion, and gain in strength and weight Physical rest in the open air in the manner described is insisted upon so long as patients have marked fever and wasting When sufficiently improved, they are allowed to take exercise cautiously, walking at first but five minutes at a time, the amount of exercise permitted being gauged by the effects It rise of temperature result, no matter how brief the exercise, they are again subjected to rest The most careful attention is paid to diet, and in all respects they are managed in accordance with the most approved principles of clinical and symptomatic treatment and individual peculiarities

Certain precautions are necessary in subjecting a consumptive patient to a mode of treatment not only vigorous but at the same time wholly at variance with what he has been accustomed to He is notoriously sensitive to cold, partly in consequence of anemia, perhaps, but largely because of exaggerated reflex sensibility on the part of the nervous system The moment a breath of cold air strikes his body, reflex contraction of the cutaneous vessels takes place and he complains of chilliness This is intensified by his fear of cold air, which makes him shun exposure and prefer a temperature of enervating warmth Indeed, his sensitiveness to drafts is so exaggerated, that as Dettweiler observes, he may be said "to have a disease of the skin as well as of the lungs" Nevertheless, inasmuch as the *pars minoris resistentiæ* is the pulmonary mucous membrane, a chill may at any time result in congestion if not actual inflammation of the lower respiratory tract Consequently if a patient is to be subjected to this open air treatment, he must undergo a hardening process to deprive him of his abnormal sensitiveness, that is, he must be gradually accustomed to cool air and drafts without feeling cold This may be done by friction of the surface, movements of the body and the adjustment of additional clothing The patient must be exposed to cool air until he begins to experience a sense of slight chilliness, when an attendant must at once begin to rub him briskly to anticipate and prevent its intensification into a pronounced rigor Sometimes it may suffice to shift about on the couch and move the extremities, or for the attendant to cover him up more warmly with additional wraps Furthermore, such a sensitive patient should not be taken out of doors in the early morning hours at a time when chills are most easily induced, but toward noon, say 11 o'clock, after he has had his breakfast and the body temperature has begun its diurnal rise If in spite of these measures a chill and consequent bronchial congestion or inflammation result, the patient must be at once taken to his room and there subjected to a reactionary or revulsive treatment This consists of dry friction underneath the clothing in such a way as not to subject the patient to still further exposure Hot drinks should be given, counter irritation applied to the chest and the rubbing continued until the surface is in a vigorous glow Then if fever comes on with other symptoms pointing to the patient's having taken cold, in spite of the measures to ward it off, he should be confined to his room until all active symptoms abate He may then again be taken into the open air and be put through the former regime As a consumptive improves in strength and endurance he may be subjected to morning sponge baths with cool water or diluted alcohol, followed by vigorous friction, and thus gradually become prepared for even so energetic a measure as the cold douche or shower bath His sleeping apartment should be kept thoroughly aired while the invalid is out of doors, and fresh air in abundance should be admitted, even at night, through an open window either in the same or an adjoining chamber

Such is the outline of the treatment advocated for consumptives not permitted by circumstances to seek a change of climate It only remains to describe briefly a practicable method which the general practitioner can carry out in the case of a private patient In the country or in a town, the air of which is not contaminated by dust and smoke as in a large city, a piazza, so situated as to get the sun, can be utilized for the purpose By means of canvas curtains or screens the invalid's couch can be sheltered from rough winds and storms If there be not a convenient veranda, a tent can be pitched or a rough shed built at the side of the house, least exposed to assaults from the weather In case the consumptive be too feeble to be actually taken out of doors he may occupy a sunny room, whose windows are kept wide open During the coldest days of winter the temperature of the apartment may be moderated by artificial heat An open grate fire is the best, but even furnace or stove heat will answer if free from coal gas A patient in the early stage may be permitted as much exercise in the carriage, in saddle or on foot as he can take without fatigue or rise of temperature This latter is a most important point and his temperature should be carefully taken and registered both before and after exercise If even slight fever result, the consumptive should be compelled to rest in the open air so long as physical effort is found to induce rise of the body heat An attendant should be provided and instructed to carefully guard her charge against chilling in the manner previously described A trained nurse would be perhaps the best, but an intelligent member of the family can be instructed in the duties of the position But this is not all, the patient himself will generally require mental as well as physical treatment He must be made to understand the necessity of the baths, frictions and douches calculated to harden his skin, also why rest, instead of exercise may be required, and he must be taught not to expect striking results at first The consumptive is either apt to be easily discouraged if he does not perceive immediate results, or on the other hand to fail of appreciating the importance of, to him, trifling details in the carrying out of a prescribed régime If the precautions are well observed, the treatment should be carried out rigorously to the extent of even the meals being taken out of doors. In many instances no doubt the prejudice of relatives and friends will have to be overcome, requiring intelligent explanation of the advantages and benefits to be expected Even in large cities, where a suitable piazza or yard space is not available a measure of the treatment can be carried out in some room selected for the purpose "Half a loaf is better than no loaf," and if the physician can not secure everything desirable in this mode of climatotherapy, he may yet improve on the overheated, ill-ventilated atmosphere in which so many hectic patients are consumed There is nothing in this plan that militates against other rational means of treatment In fact, everything medicinal, dietetic and hygienic, conducive to recovery, should be utilized Symptoms will not disappear at once or even rapidly, but most of them particularly the fever will be favorably influenced If the invalid continues to perspire freely his nurse should dry him by prolonged friction under the clothing His appetite should be encouraged and his dietary carefully supervised each day Consumption is a mixed process, destruction of pulmonary tissue on the one hand with the phenomena of septic infection on the other There is consequently abnormal metabolism of tissue, calling for greater intake of oxygen, yet there is deficient lung capacity to meet the demand for increased oxydation and hematosis Is it not rational therefore that the consumptive be placed in such an environment, as will best fulfill the needs of his organism? The statistics at Falkenstein and Gorbersdorf furnish the answer

Venetian Building

A CASE OF OBSTRUCTION OF THE BOWEL FOUR DAYS AFTER ABDOMINAL SECTION—SECONDARY OPERATION—RECOVERY

REMARKS ON PERITONEAL ADHESIONS

BY FRANK C FERGUSON, M D
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Mrs G , age 37, living in Huntington, Ind , was brought to my Sanatorium by her physician, Dr Charles W Wright, Feb 15, 1895 She was the mother of two children, aged respectively 13 and 6 years Had been an invalid since the birth of the younger child She complained of backache, headache, pelvic pain, indigestion, leucorrhea, dysmenorrhea and insomnia Her appetite was good, but on account of gastric irritability she could rarely consume a good meal She was emaciated and extremely nervous Bowels constipated, vesical irritability

Pelvic examination discovered a sharply retroflexed uterus bound down by adhesions, and an enlarged prolapsed ovary, pressure upon which elicited exquisite pain Measurement of the uterus showed a longitudinal diameter of three and one-half inches After one week's preparatory treatment, abdominal section, with the assistance of Drs F B Wynn, Martha J Smith and S E Crose, was made Feb 22, 1895 The right ovary was adherent to a coil of intestine, three times its normal size, chronically inflamed, and a number of cysts were scattered over its surface The corresponding tube enlarged and inflamed Left ovary and tube healthy in appearance

The adhesion between the ovary and intestine was carefully separated, a ligature of chromicized catgut adjusted as closely as possible to the cornu of the uterus, and ovary and tube severed with the thermo-cautery The stump was thoroughly charred with the cautery and dropped The uterus was then brought forward, after separating the adhesions, and sutured to the abdominal wall, after Pozzi's method The incision was closed by six silkworm gut sutures The operation was completed within a half-hour and the patient put to bed in good condition

The progress of the case was satisfactory in all respects until the following Sunday evening, (four days after the operation) when symptoms of intestinal obstruction made their appearance The patient vomited several times and had paroxysmal pain in the right ovarian region Several efforts which failed, were made during the night to procure an evacuation from the bowels by rectal injections On Monday morning the patient expressed herself as feeling better and took some nourishment which she retained, pulse 120, temperature 99 5 degrees F There was tenderness upon pressure over the right ovarian region, but no tympanites or tenderness of the abdomen During the day a saline cathartic was given, followed by rectal injection, but no movement was secured In the evening, nausea and vomiting again supervened, paroxysmal pain increased, which was relieved with morphia hypodermatically, the pulse mounted to 140, temperature 103 degrees F , and the abdomen became rapidly tympanitic During the night she was given 10 grains of calomel in divided doses and three doses of Rochelle salts which she retained This was followed in the early morning with high rectal injections, but the bowels obstinately refused to respond

Condition Tuesday morning at 10 o'clock Temperature 99 5, pulse 140, abdomen greatly distended and interfering with breathing She is very weak but has not that haggard expression of countenance invariably noticed in peritonitis, still complains of colicky pain in the right ovarian region Inspection of the abdomen revealed several coils of the small intestine in active vermicular motion, which convinced me that I had been in error in attributing the obstruction to paresis of the bowel It evidently arose from adhesion, most probably between the stump and intestine

During the day she was given, hypodermatically, every three hours, 1 30 grain strychnin and 1-100 gr digitalin A rectal tube was passed several times as far as the hepatic flexure of the colon, and injections given of turpentine emulsion, hot water and milk of assafetida, with no result, except a passage of flatus when the fluid was expelled In the afternoon I called Dr Dunning in consultation Her condition had been steadily growing worse during the day We agreed that peritonitis did not exist, that the bowel was obstructed from adhesions and that a secondary operation afforded the only hope of saving her life I had telegraphed for the husband on the previous night and was anxiously expecting him in the early afternoon, as I did not like to reopen the abdomen without his consent, and yet time was precious He was late in his arrival, but after explaining matters to him he consented that I might do anything that in our judgment was necessary At 7 P M, assisted by Drs L H Dunning, Martha J Smith and Frank B Wynn, who kindly gave the anesthetic, I reopened the abdomen by rapidly severing the sutures with scissors and pressing the wound apart with my fingers A coil of intestine was found adherent to the ovarian stump, bending it to a sharp angle, thus completely obstructing the bowel The peritoneum was normal, the fundus uteri well up against the abdominal wall After liberating the intestine and flushing the peritoneal cavity with hot aseptic water, a quantity of which was allowed to remain, a strip of iodoform gauze drainage was passed down and made to cover the stump, in order to prevent a recurrence of the accident The fundus uteri was again sutured to the abdominal wall and the wound closed with silkworm gut sutures A pad of iodoform gauze covered with a thick layer of absorbent cotton and a bandage completed the peritoneal toilet, and the patient was placed in bed Pulse 150, temperature 100 degrees F In the course of an hour she rallied from the anesthetic, but was so exhausted that she could not speak above a whisper Nausea, vomiting and pain, however, had disappeared During the night she received three rectal injections of milk and whisky, which she retained, and three hypodermatic injections of 1-30 gr of strychnin and 1 50 digitalin and several hypodermics of 1-100 gr nitro glycerin, when unusual depression was noticed

At 8 A M Wednesday morning she suddenly went into collapse, pulse disappeared, and respiration declined to four or five per minute I thought she was dying and called the husband An injection of 1-50 grain nitro glycerin, however, soon brought up the pulse and she again became conscious Pulse 180 Throughout the day and during the night, these periods of extreme depression reappeared every hour or two, requiring the utmost vigilance upon the part of both nurse and physician

It is unnecessary to go further into the details of symptoms and treatment, suffice it to say that twenty-four hours after the operation her bowels moved copiously, very slowly she came out of the awful depression which every moment threatened her life, and at this writing, one week after the secondary operation, she has passed the danger line, and I am sure will make a rapid convalescence [1]

How to prevent peritoneal adhesions after abdominal section is, perhaps, the most important problem that now confronts the abdominal surgeon The technique of intra-abdominal surgery, so far as the removal of abdominal growths, diseased organs and tissues is concerned, has been brought to such perfection that little remains to be done, and it is doubtful if any further improvements in this direction will be of much utility But no safe and expeditious method has yet been devised for the prevention of peritoneal adhesions—the constant dread of the surgeon and a standing menace to the life, health and comfort of the patient

While it is true that plastic surgery will contribute much, in some cases, to the prevention of post-operative adhesions, yet it is oftentimes practically impossible to cover all injured surfaces with healthy peritoneum, both on account of the difficulty in finding them, and because the length of time consumed in plastic work is more dangerous to the life of the patient than the risk of adhesions The Trendelenburg position enables the operator to discover peritoneal traumata which, otherwise, would not be found, nevertheless the greatly increased dangers to the patient from prolonged anesthesia and long continued exposure of the peritoneum, will, in many cases, overbalance any advantages that accrue from plastic work

I think it is generally admitted by abdominal surgeons that, other things being equal, the sooner an operation can be completed and the abdomen closed the less danger there is to the life of the patient Dr Alex J C Skene, in an able article contributed to the *Brooklyn Medical Journal* (February, 1895) entitled, "Defects in Surgery as taught and practiced at the present Time," calls especial attention to prolonged anesthesia and slow operating as fruitful causes of death after surgical operations "Rapid operating," he says, "is essential and imperative Every moment wasted in an operation is a detriment to the patient as well as the surgeon Operations that are quite well done are done quickly, as a rule Slow operating is generally imperfect It is often said that a quarter of an hour, more or less, in the duration of an operation makes very little difference This I conceive to be a very great error Rapidity of operation is especially necessary in order to avoid prolonged anesthesia All anesthetics are injurious, and tend to retard recovery from operations and impair the health of patients subsequently The longer one is kept in a state of anesthesia, the more harm is done Again, time is precious, because the longer the tissues are exposed and the more they are handled, the more slowly and imperfectly they heal Tissues exposed to the air for an hour or more, begin preparation for healing by granulation and are, therefore, less capable of uniting by immediate union Especially are non-union, suppuration and sepsis likely to follow if the patient has been intoxicated for a long time by the use of the anesthetic, and unfortunately, prolonged anesthesia and unnecessary injury of tissues usually come together"

I do not quote the above as an argument against plastic surgery of the peritoneum whenever it can be done quickly and with safety to the patient But in all cases where we have reason to believe that the time consumed in such work will endanger life, some other means should be adopted to minimize the danger of post-operative adhesions, and the abdomen closed as quickly as possible A living patient with intra-peritoneal adhesions is much more to be admired and is a far better advertisement for the surgeon than a dead or dying one whose interior has been ever so artistically decorated with plastic surgery

Are there any expeditious and efficient measures which can be used to prevent post-operative adhesions? Several plans have been proposed by authors, but the limits of this paper will not permit their enumeration I shall, therefore, speak of but two, those which from personal experience I believe will give the best results, viz, flushing the abdominal cavity with aseptic water, and frequent changes in the posture of the patient

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[1] March 30 1895 The patient has completely recovered The uterus is in normal position and all symptoms of pelvic disease have disappeared

Malcolm, of London, in 1891 first directed attention to a mode in which washing out the peritoneal cavity might act beneficially in the prevention of adhesions (*Annual of the Universal Medical Sciences*, 1891, vol III) "It affords," he says, "an important means for promoting a natural adjustment of the intestines If in completing the process of washing, the abdominal cavity be distended with fluid, the intestines must be floated up toward the highest circle of the cavity, thus facilitating changes in the relative positions of the various coils and straightening out the mesentery, undoing acute twists and throwing it and the bowels into natural folds If the fluid is then permitted to flow out or carefully sucked out of the pelvis by means of a tube, the intestines will tend to settle down in a natural position Adhesions, when the intestines are in normal position, do not produce obstruction"

My own personal experience has convinced me of the great utility of this method I do not, however, permit the fluid to escape from the abdominal cavity, but leave it there to be slowly absorbed It can do no possible harm and I believe that it contributes no little to the prevention of adhesions by permitting the intestines to glide freely upon each other so long as the fluid remains in the cavity, thus forestalling adhesions in their incipiency

The next measure for preventing adhesions, which admirably supplements the preceding, is a frequent change of the posture of the patient I was led to adopt this plan from the observations of Dr Malcolm, that patients who suffer much after abdominal section from vomiting caused by the anesthetic, not infrequently recover more satisfactorily and more promptly than those who are not so affected His explanation is, that the retching and straining in the efforts at vomiting have a tendency to restore to a natural position the displaced intestines before adhesions form or become firm This explanation, in my opinion, does not go far enough, for it is quite probable that the churning of the intestines by the diaphragm and abdominal muscles, during the act of vomiting, is a potent factor in the actual prevention of adhesions, as well as tending to restore the intestines to normal position

During the last three years I have adopted these methods in several cases of abdominal section for pyosalpinx in which the adhesions were of such nature that a differentiation of tube, ovary and intestine was wellnigh impossible The adhesions were broken up and ovaries and tubes removed with much difficulty The patients recovered promptly and have been, up to date, free from pelvic pain, neither have they had at any time other symptoms of adhesions I can not say that adhesions do not exist in these cases, but if they do they are so benign in character that they produce no inconvenience

I did not flush the pelvic cavity with aseptic water in the case reported, because there seemed no necessity for doing so The operation was done aseptically, it was almost bloodless, and but a few drops of blood, if any, escaped into the peritoneal cavity, the traumatism inflicted upon the peritoneum was very slight, indeed, and yet within four days it became necessary to reopen the abdomen to save the life of the patient I am firmly of the opinion that had I flushed the pelvic cavity with aseptic water and closed it while full of the fluid the accident would not have occurred

There are two other points in the case of great interest, viz, the extreme rapidity of the pulse for four or five days succeeding the second operation, and the large amount of strychnia given hypodermatically During the first twenty-four hours succeeding the operation the pulse did not fall below 160, and frequently ran to 180 During the second day it ran from 150 to 160, third day from 140 to 160, fourth day from 130 to 150, fifth day from 120 to 140, sixth day from 110 to 120 On the seventh day it declined to 100 The temperature ran from 99 5 to 103 F During the twenty-four hours preceding the operation, the patient was given hypodermatically, every four hours, 1-30 gr strychnia and 1-100 gr digitalin The first twenty-four hours succeeding the operation she received every four hours the same quantity of strychnia and digitalin, and some six hypodermics of 1-100 to 1-50 gr nitro glycerin The third day she received, every four hours, the same quantity of strychnia and digitalin, the fourth day the same doses every six hours, the fifth day three doses It was not until the fourth day that I perceived any distinct symptoms of the physiologic action of the drug

The case is a very instructive one and teaches two or three valuable lessons, viz

1 That serious obstruction of the bowel may arise from an insignificant wound of the peritoneum

2 That perseverance in judicious therapy may sometimes save life, even when the case seems absolutely hopeless

3 It emphasizes the necessity, in such cases, for prompt surgical interference Had we deferred the operation in the case reported, a few hours longer, a valuable life would have been sacrificed

In conclusion, I wish to express my grateful acknowledgments to Drs L H Dunning, Frank B Wynn and Martha J Smith, to whose wise counsel and efficient assistance I am indebted in a great measure for the successful issue of the case

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VAGINAL OÓPHORECTOMY

BY C P THOMAS, M D
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It has been very evident to the writer, for the past two years, that celiotomy for the removal of small, cystic, prolapsed, painful or adherent ovaries, or small tubal cysts or pus tubes, even by those who have done the greatest number of these operations, is fast falling into disrepute

Many of our leading gynecologists are curetting, or packing the uterus, or attempting to catheterize the Fallopian tubes, with the vain hope of avoiding the necessity of opening the abdominal cavity for their removal in the usual way

At least two of our latest works on gynecology recommend that curettage be tried for pus tubes, and if that fails, give rest and expectant treatment, with general tonics, and the pus will often disappear by absorption, or through inspissation

The same writer admits, however, that single pus tubes are more dangerous than double ones, owing to the liability to accident should the woman become pregnant, and it is in such cases that the operation I here advocate will be especially applicable

The accidents incident to making and closing the abdominal incision are so well known to every operator that I will not dwell upon them, also the unfavorable sequela, such as hernia, stitch abscess, and last but not least adhesions, not alone of the omentum but also of the intestine, producing colic, pain, and even strangulation

These and many more are the reasons why the abdominal method of removing small cystic, prolapsed or adherent tubes or ovaries should be abandoned for the vaginal method By removing them through a small incision in the posterior cul de sac, where ample room is provided for the operation, in the hands of any one competent to do major gynecologic surgery, it is a safe, simple procedure, free from the dangers just enumerated Should the operation be undertaken and a tumor found to be too large or adherent to be completely removed in this way, the operator can then resort to the abdominal method, and the opening in the vagina will do no harm and may perchance do good by affording perfect drainage

I also believe that this is a valuable form of drainage and should be resorted to often, when a drain is required following abdominal section

The steps of the operation are as follows With the patient in the extreme dorsal position, held by a Clover's crutch, the vagina and external genitals are thoroughly cleansed with soap and water, bichlorid and alcohol The posterior vaginal retractor being introduced (the self-retaining one of Dr Beach, of Chicago, being the best I have used), the posterior lip of the cervix is caught by a vulsellum forceps, the uterus curetted, and irrigated if necessary The cervix is then drawn forward and upward, and with a flat curved pair of scissors the posterior vaginal mucous membrane where it joins the cervix is clipped and with closed scissors or the finger it is stripped back from the cervix to the peritoneum, which is caught with a catch-tooth forcep, and an opening made large enough to admit a finger The incision may then be enlarged laterally at will, provided you do not cut up, on either side to the uterine arteries or down to the rectum

There is no bleeding of importance and with two fingers of one hand, then the other, the ovaries and tubes can be examined and adhesions, if not too strong, broken They are then easily drawn down into the vagina, caught with a strong pair of forceps, the pedicle ligated, severed, and stump returned

In one instance where I was required to operate quickly, I clamped the stump with pressure forceps, removed both tubes and ovaries, leaving the forceps in position for thirty-six hours The vaginal opening was left for nature to close, which it did, in a few days, the patient leaving the hospital well in three weeks

If there have been many adhesions broken, or a pus cavity opened, the vaginal wound should be packed with a strip of iodoform gauze, if not, it should be closed with one or two stitches of silkworm gut, passed through the mucous membrane and peritoneum, and fastened with the shot and coil

The time required for the operation should not exceed twenty minutes and the cervix may be repaired, and any of the vaginal operations done, at the same time

When there is extreme retro displacement of the uterus, with prolapsed adherent ovaries, their removal will generally allow the uterus to regain its normal position, and the depletion incident to the curettement, repair of cervix, etc, will often permanently cure the patient

If the retroversion is extreme, the uterus may be anteverted and stitched to the anterior vaginal wall after the method of Mackenrodt which is so highly indorsed by Martin, of Berlin, or in the hands of an expert the so called Alexander's operation might be done after the finger had passed well around the uterus making sure there were no adhesions left

I have performed vaginal oophorectomy twenty times for the different conditions described above, including two for large gonorrheal pus tubes, and all have recovered from the operation, nor has there been any unfavorable complication, and I am sure that the after results have been much better than the same kind of cases for which abdominal section has been done The difference in the amount of shock and the time required for recovery between the two methods can be compared with the same between vaginal and abdominal hysterectomy I have searched in vain through my limited library to find the vaginal removal of ovaries recommended, and although my experience with the operation has not been extensive, I feel that the success which I have met may stimulate others to adopt it and write further on the subject

The advantages I claim for the operation are as follows

1 Rapidity of operation—twelve to twenty minutes
2 Freedom from hernia
3 Freedom from shock and vomiting
4 Freedom from adhesions or intestinal injury
5 Freedom from stitch abscess, causing long and tedious convalescence
6 Natural drainage, preventing peritonitis
7 The ease with which other operations upon the cervix and vagina may be done at the same time, which so greatly aid in restoring the patient to health

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ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER 1854-1894

BY JOSEPH JONES, M D, LL D
NEW ORLEANS LA

(Continued from page 482)

CHAPTER VII

EXAMINATION OF FLUID BLOOD FROM CAVITIES OF HEART THREE HOURS AFTER DEATH

The blood after its abstraction coagulated, forming a loose clot, the fibrin, however, dissolved and no serum was separated Under the microscope the blood corpuscles presented no special alterations, when spread upon the glass slide, and also during the coagulation of the blood, they rapidly agglomerated together, forming rouleaux, as in inflammation in the blood of the horse The running together of the colored corpuscles was as rapid and as complete as in cases of well marked inflammation

It was impossible to determine the weight of the fibrin, or to collect pure serum, free from colored blood corpuscles and the coloring matter of the red corpuscles, as the fibrin rapidly dissolved after its partial separation. The fibrin was in very small amount, and apparently not one-thirtieth of the usual proportion. Specific gravity of blood from cavities of heart, 1047.

1,000 parts of blood from cavities of heart contained:

Water		821.57
Solid residue 178.43	Organic matters, colored corpuscles, albumin, urea, extractive and fatty matters, etc.	170.59
	Fixed saline constituents	7.84
	Fibrin	Traces

Three hours after death, specific gravity of blood from vena cava 1062. Blood fluid and warm when drawn, coagulated, forming a very loose coagulum, which did not inclose the whole amount of colored corpuscles. This coagulum gradually dissolved, and it was impossible to determine the amount of fibrin or to obtain clear serum free from colored corpuscles. Reaction of blood slightly acid.

1,000 parts of blood contained:

Water		775.00
Solid residue 225.00	Organic matters, colored blood corpuscles, albumin urea and ammonia	217.31
	Fibrin	Traces
	Saline constituents	7.69

It will be observed that the blood in the vena cava contained more solid matter than that in the cavities of the heart, it would appear that the returning current of blood from the capillaries and venous system, owing to the tendency to coagulation and congestion, contained more solid matters than the blood of the heart.

No vegetable or animal forms were discovered in the blood.

Yellow fever blood exposed upon my table, in capsules and bottles for days and weeks, and examined microscopically from time to time, developed no special forms which could be referred exclusively to yellow fever. Only the simpler forms of animal and vegetable life made their appearance, which might be developed in any other similarly constituted albuminous fluid.

In a fatal case of yellow fever, occurring in one of my wards in the Charity Hospital during the month of October, 1871, in a stout young man, aged 25, who from the results of the post mortem examination, had evidently suffered with malarial fever, incipient cirrhosis of the liver and granular degeneration of the kidney, before the supervention of yellow fever, death occurred after an illness of ten days, the disease was complicated during its progress by the supervention of pericarditis, pleuritis and pneumonia. The urinary secretion was abundant until near the close of life, and the urine contained blood corpuscles and the coloring matters of the blood. The cavities of the heart were filled with loosely coagulated blood. Portions of the lungs were infiltrated with blood, as if hemorrhage had taken place in and around the textures of the lung. Louis, in his "Anatomical, Pathological and Therapeutic Researches on the Yellow Fever of Gibraltar" of 1828, has shown that the exudation of blood into the pulmonary tissue was frequent, while the inflammation of that tissue was rare in subjects who had died of yellow fever. He found the lungs entirely natural in three subjects only.

Black spots, and masses of the same color, more or less impermeable to the air, were found in these subjects usually of a brownish black, rarely of a crimson hue, they were more or less concentrated, and occupied a variable space at the exterior or in the interior of the lung, and in some cases they were found only in the lower lobe. The black or blackish masses which existed in the lungs of six individuals contained no air, had no granular aspects as in the hepatized lung of pneumonia and presented no traces of organization, usually they could be easily broken down, in some cases yielding by pressure, the blood of which they were almost entirely composed, and the pulmonary parenchyma remained apparently of its natural consistency. In this case complicated by the suppuration of inflammatory disease, the fibrin of the blood was not diminished to the extent usual in yellow fever. The pre-existing effects of malarial fever were evident in the masses of black pigmentary matter, derived from the hematin of the blood, scattered through the lobuli of the liver, but chiefly accumulated in the peripheral portions, in and around the portal veins and portal capillaries.

In uncomplicated yellow fever these altered masses of hematin are uniformly absent from the structures of the liver, their place is supplied by oil globules, and it would appear that in this disease the albuminous constituent of the blood and tissues is chiefly altered, the altered albumin appearing in abundance in the urine, while in malarial fever the colored blood corpuscles are chiefly attacked, the coloring matter being deposited in various organs, but in the acute stages of uncomplicated malarial fever, albumin rarely, if ever, appears in the urine.

The results of my investigations upon the occurrence of pigment in the blood and in certain organs, as the liver, spleen and kidneys, in the capillaries of the brain, in persistent intermittent and remittent malarial fevers, in chronic malarial poisoning, correspond with those of Meckel, Virchow, Heschl and Platner, and more especially with the researches of Frerichs. Not only is the spleen enlarged and the color of the liver altered to a steel gray, blackish slate and chocolate or bronze color, in individuals who die from the effects of marsh poison, but this change of color may extend to other organs as the kidneys and brain. Careful microscopic examinations of sections of the various organs have shown that these changes of color are clearly referable to the formation and accumulation of pigment matter resulting from destructive and abnormal changes of the colored blood corpuscles. While from the anatomic structure of the spleen, as well as from the great congestion which it undergoes during the cold stage of malarial fever, it is without doubt true that a large portion of this pigment is formed in the sinuses of the spleen and passes from this organ into the portal veins, and that part of it remains impacted in the capillaries of the liver, while the rest passes through these capillaries, and is carried into the general circulation, at the same time it must be admitted that under the action of the malarial poison, the transformation of the red matter of the blood into black pigment may take place everywhere throughout the vascular system, and also external to it, but more especially in the liver and kidneys. If fine sections of the malarial liver be made with Valentine's knife, and examined under comparatively low magnifying powers (one and a half to one inch), as I have done in a large number of subjects, accumulations of pigment will be observed in the capillary network of the portal and hepatic veins, either uniformly distributed or limited to certain regions, sometimes deposited chiefly in the interlobular veins, forming black margins to the lobules of the liver, or more uniformly, extending from the circumference of the lobules halfway to their center, or penetrating as far as the beginning of the hepatic veins The hepatic cells, as in the case under consideration, remain exempt from the deposits of black coloring matter

That portion of the pigment originating in the spleen and passing through the capillaries of the liver, enters the general circulation and may be deposited in various organs as the brain, kidneys and lungs, inducing morbid symptoms varying in character and degree with the organ whose capillary circulation may be especially retarded by the arrest of the pigment particles The larger particles remain impacted in the capillaries of the portal vein and obstruct the circulation of the blood through these vessels, causing various derangements in the secretion of the liver, and in some cases extensive capillary stagnation of the blood in the roots of the portal vein, attended with exhausting hemorrhages from the gastro intestinal mucous membrane, of an intermittent character, profuse diarrhea, vomiting, serous effusions into the peritoneal sac and, finally, from the obstruction of many of the smaller branches of the portal vein, chronic atrophy of the liver, with its distressing and fatal consequences

Even by simple inspection of the brain we may form some idea, not only as to the cause of the alteration from the color of health, but also of the amount of pigment which has passed unarrested through the vessels of the liver and lungs The mechanical interruption to the circulation of the brain thus induced, not only gives rise to a peculiar train of symptoms, but may also cause the rupture of the small vessels and the formation of numerous capillary apoplexies, as has been shown so clearly by Meckel, Platner and Frerichs

Frerichs has shown, and I have upon many occasions confirmed the accuracy of his investigations, that the large pigment granules and cells which enter the kidneys along with the arterial blood, not unfrequently become impacted in the capillary coils of the Malpighian bodies, and by altering the pressure of the blood give rise to derangements in the secretion of urine, which exercise a powerful influence over the further progress of the disease Albuminuria, fibrinous casts, pigment masses and granules, blood corpuscles characteristic of the urine in malarial hematuria should to a large extent be referred to the effects of the pigment particles arrested in the capillaries of the kidneys Hemorrhage, congestion, exfoliation of the excretory cells of the tubuli uriniferi, fibrinous exudation into the excretory tubes, and even complete suppression of the urinary secretion may occur in such cases Destruction of the colored blood corpuscles may in like manner occur directly in the capillaries of the kidneys in malarial fever, and the pigment thus formed may give rise to a similar train of symptoms

As far as my observations have extended, no such changes take place in the colored blood corpuscles and various organs in yellow fever—they are not destroyed in the various organs, neither is there a special diminution of these important elements, and all the organs and tissues are free from the presence of pigment granules in uncomplicated yellow fever

If, however, as in the preceding case, the yellow fever occurs in one who has previously suffered with malarial fever, or if the disease supervenes upon yellow fever, then the pigment matter may be present to a greater or less extent, especially in the liver and spleen

The result obtained by actual chemic analysis and careful microscopic research, viz that the colored blood corpuscles are not specially destroyed in yellow fever, as is the case in malarial fever, is still further sustained, by the well-established fact that, in general, convalescence is rapid and complete, and attended with a speedy restoration of all the healthy functions Such a rapid and complete restoration would be impossible if the colored blood corpuscles were destroyed to any great extent in yellow fever

During the latter months of 1870, when 587 deaths from yellow fever, were officially reported by the authorities of New Orleans, although the number was probably greater, as 445 deaths were during the same period (August, September, October, November and December), referred to the various forms of malarial fever, I instituted in like manner careful chemic and microscopic examinations of the urine, blood and black vomit of the various organs in yellow fever, and the results were similar in all respects to those recorded at length in the preceding pages, we shall for the sake of brevity simply allude to some of the more general results

The type of the disease was severe and I saw cases in which the defibrinated blood oozed from leech bites, from the ears and from the gums and mouth, some cases suffered with profuse hemorrhage from the bowels before death The bodies underwent putrefaction a very short time after death, having emitted during life a most disagreeable, foul yellow fever odor The black vomit contained uniformly colored blood corpuscles variously altered also mucous epithelium from the gastric mucous membrane, sometimes various matters, as medicine, food and drink taken by the patient, oftener numerous vibrios and plants resembling the torula and sarcinæ were present, but I was unable to detect any specific vegetable forms characteristic of yellow fever The urine contained albumin and in the fatal cases was almost uniformly suppressed In the worst cases the urine consisted only of a yellowish albuminoid fluid discolored by bile, containing little or no urea, but loaded with excretory cells and granular fibroid casts of the tubuli uriniferi The lightest colored urine was frequently characteristic of the severest cases

As a general rule, the blood changed to the arterial hue upon exposure to the atmosphere, and the cut and exposed muscles presented a beautiful scarlet color

In some cases golden colored heart clots of small size and slight consistency, composed of yellow laminated fibrin were observed in the cavities of the heart, and in those cases which had suffered with black vomit Blood drawn from the cavities of the heart, after death from yellow fever, and carefully examined under the microscope presented swollen and stellate blood corpuscles This stellate condition of the blood corpuscles appears to be very common in the blood of yellow fever, and even in that drawn from the veins during life When a drop of yellow fever blood is allowed to fall upon white bibulous paper, the red corpuscles occupy the original area of the drop, and are surrounded by a golden circle of the serum colored by bile In any fatal case occurring during the fall of 1870, which fell under my observation, the serum was of a bright golden color from the presence of bile

The nervous symptoms characteristic of this disease were referred, in great measure at least to the retention of the biliary matters in the blood, to the suppression of the function of the kidneys and the retention in the blood of the urinary constituents, especially of the urea in the blood

The chief causes of death in these cases of yellow fever appeared to be the direct action of the febrile poison upon the nervous system and blood, depressing and deranging the one and rendering the other unfit for the proper nutrition of the tissues, the suppression of the functions of certain organs, as the kidneys and liver and the retention in the blood of the excretions normally eliminated by these organs Blood loaded with bile and urea is evidently unfit for the maintenance of healthy nutrition and of the vital acts

The hemorrhage from the gastric mucous membrane appeared to have been due to several causes, as the direct irritant effect of the poison upon the gastric mucous membrane, the destruction of the fibrin of the blood, the physical and chemical alterations of the albumin, and the irritant and dissolvent and *excoriating* effect of the carbonate of ammonia, resulting from the decomposition of the urea

The black vomit in yellow fever, as shown by the observations upon numerous specimens obtained during life, and taken from the stomach after death, consists of altered blood corpuscles, the epithelial cells of the stomach, mucus corpuscles, various matters received into the stomach, as food, medicine, water, etc , serous exudations, acids of the gastric juice (acetic, hydrochloric and phosphoric), urea, carbonate of ammonia, and various forms of animal and vegetable life of simple organization

After careful examinations of numerous specimens of black vomit, we failed to detect any forms which could be considered as characteristic of this fluid, which may not be developed in albuminous fluids exposed to the action of the atmosphere, at all times, whether yellow fever be present or absent

The careful microscopic examination of the blood with the highest powers, was equally fruitless in disclosing any forms of animal or vegetable life which could be considered as active in the production of yellow fever, or as invariably accompanying its manifestations

We have established by the preceding observations

1 The blood in yellow fever often if not always contains abnormal amounts of *urea* and *bile*

2 The presence of the urea and bile in the blood is attended with certain nervous disturbances

3 It is probable that the extreme slowness of the pulse which characterizes many cases of yellow fever, after the subsidence of the first stage of febrile excitement, is due to the presence of the bile and urinary constituents in the blood, as well as to the anatomic lesions of the heart

4 The fibrin is greatly diminished in the blood of yellow fever

5 The passive hemorrhages and capillary congestion in yellow fever are without doubt largely dependent upon the diminution of the fibrin

6 The colored blood corpuscles are not specially diminished in yellow fever, and in this respect the disease differs widely from malarial fever

Case of yellow fever engrafted on malarial fever, suppression of urine, black vomit, hemorrhage into gall bladder Francis Dubusé, harness maker, age 32, native of France Admitted Oct 4, 1874, to Charity Hospital with intermittent fever, discharged October 9 After his discharge moved across the river to Gretna and followed the occupation of milkman Some time, however, in the month of November, returned to the city and resided in Chartres Street in a neighborhood in which cases of yellow fever had occurred

Entered Charity Hospital December 4 Had been sick with pain in the head, back and extremities for six days and had thrown up black vomit before entering Charity Hospital Condition on entrance deep yellow (jaundiced) color of skin and conjunctiva of eyes, sluggish capillary circulation, slow pulse, nausea, vomiting black vomit, temperature but slightly elevated above the normal standard Urine of yellow color, turbid from the presence of urinary casts and cells from the urinary tubes and granular matter Urinary casts as soon as the albumin coagulated by heat, presented a golden color Diagnosis yellow fever The urinary excretion progressively diminished in amount, and toward the close of life, during the last thirty hours, was entirely suppressed Died December 9, on the ninth day of the disease

Post-mortem six hours after death Exterior, head, trunk and extremities pale, surface of entire body of a golden color, the dependent portions being mottled of a purplish color Black vomit issuing from corners of mouth Head blood vessels of brain congested with dark blood Thorax lungs normal, lower portions of darker color than upper portions, from settling of blood Heart yellow, flabby, softened muscular textures readily crushed between the fingers, and under the microscope the fibers of the heart presented the changes characteristic of yellow fever, the transverse striæ being indistinct, and numerous oil globules and yellow granular matter being deposited within and around the muscular fibers

Abdominal cavity mucous membrane of the stomach, of a deep purple color, with deep ecchymoses Under a low magnifying power the ruptured mouths of the small blood vessels were clearly seen The stomach contained several ounces of thick black vomit resembling putrid blood Reaction of black vomit neutral Specific gravity of black vomit 1032 Upon analysis, 1,000 grains of black vomit yielded 70 grains of coagulable albuminoid matters After the removal of the albuminoid and coloring matters of the blood from the black vomit, the remaining liquid contained in addition to phosphates, sulphates and chlorids of the alkalies and alkalin earths, urea and salts of ammonia Under the microscope, the morphologic elements of the black vomit were found to be colored blood corpuscles, mucus, corpuscles and cells from the mucous membrane of the stomach No spores or vegetable organisms were observed Upon standing, vibrios made their appearance in considerable numbers, but no fungoid growths were developed even at the end of forty-eight hours The temperature appeared to be too low for the rapid development of the fungi It is, however, worthy of note that the yellow fever had attacked this patient in the winter, December 1

Liver This organ presented on the surface a dark purplish mottled color, and upon a superficial examination presented nothing abnormal in color, except an increase in the depth of the normal shade When sections of the liver were made, carefully washed and examined they presented a distinct and characteristic mottled color, many of the lobuli being of the peculiar yellow color of yellow fever, and others presenting a variegated yellow and deep bronze color Careful microscopic examination revealed the fact that the yellow portions were loaded with oil globules and yellow granular matter as in yellow fever, and that the more deeply colored portions contained numerous pigment particles as in malarial fever The mottling of the usual yellow fever deposits, was due to the deposit of pigment particles in and around the portal capillaries during the preceding attack of *malarial fever Under the microscope* the liver cells were found to be loaded with oil globules as in yellow fever, dark pigment particles were also scattered through the structures of the liver, but existed in greatest numbers within and around the peripheral or portal capillaries of the lobuli The peculiar appearance of the *liver in this case*, was clearly the results of the combined effects of yellow fever and malarial fever the latter having preceded the former

Gall bladder *the gall bladder was distended* with a dark fluid of a brownish and reddish black color, and upon a superficial examination resembled this viscus in malarial fever When the bile was poured out it resembled in appearance dark liquid blood Specific gravity of the fluid *from the gall bladder* 1021 5, reaction neutral Amount of fluid in the gall bladder 1,600 grains Heat and nitric acid caused coagulation, *coagulum* of a dark mahogany color like that always formed in liquid blood under the action of heat and nitric acid

Under the microscope, the fluid from the gall bladder was found to contain numerous altered colored blood corpuscles and epithelial cells of the mucous membrane of the gall bladder The mucous membrane of the gall bladder was of a deep purple congested color, resembling in all respects the deeply congested and purple mucous membrane of the stomach Amount of coagulable albuminoid matter in 1,600 grains of bloody liquid from the gall bladder, grains 44 70 Nitric acid produced no change of color, similar to that caused by the coloring matter of the bile, numerous tests also repeatedly and carefully applied failed *to show* the presence of the biliary acids The reagents simply caused coagulation of the albumin, as in ordinary liquid and diluted blood The filtrate obtained after the coagulation and removal of the albuminoid elements of the blood was found to be loaded with urea The liquid therefore found in the gall bladder was not *bile* but *altered liquid blood*, similar to that poured into the stomach and called black vomit

We have in this case and in the preceding facts, a striking and important illustration of the sources of error in the investigation of the pathologic anatomy of yellow fever Superficial observers here and elsewhere have proclaimed that yellow fever had no distinctive pathology Such assertions possess no value unless based upon the most careful and thorough microscopic and chemic investigations

Kidneys these organs presented a yellow color resembling that of *the heart* When sections of these organs were made with Valentin's knife and carefully examined under the microscope, the Malpighian corpuscles and tubuli uriniferi were found to be loaded and impacted with desquamated cells, oil globules and yellow granular *matter*

Yellow fever engrafted on intermittent fever, suppression of urine, black vomit, death, hemorrhage into gall bladder *L Johnson age* 27, *native* of New York, laborer Came to New Orleans in January, 1874 Went from this city to work on jetties at the mouth of Mississippi River Entered Charity Hospital Nov 20, 1875 Patient stated that he had been suffering with intermittent fever for one month Walked about the ward until the evening I saw him the next morning November 21 Has rapid pulse and high fever Quinin was administered freely but without any effect upon the fever November 22, fever continues, patient very restless, eyes injected, tenderness over region *of liver*, epigastrium and small of back over the kidneys Has been vomiting *Quinin repeated, but without any beneficial effects* November 23, fever declining, great capillary congestion of face neck and *extremities*, yellow tinge of surface, very restless and delirious, injected eyes, urinary excretion greatly diminished November 24, heat of body almost normal, but capillary congestion intense and jaundice increasing Urinary excretion greatly diminished and in fact almost wholly suppressed, delirium, has vomited dark "coffee ground" matter November 25, restless and delirious, pulse 68, respiration 25, temperature of axilla 95 degrees Head, trunk and extremities feel cool Great capillary congestion *of surface which presents a purplish and mottled* appearance, with a distinct golden color, complete suppression *of urine Upon* careful examination the bladder is found to be entirely empty, great prostration of muscular and nervous systems, patient delirious and restless During the past two days it has been impossible to arouse the patient or to obtain from him any coherent answer, 6 P M, pulse 68, respiration 28, temperature of axilla 95 5 degrees The patient died one hour after this observation

Necropsy thirteen hours after death Exterior, trunk and limbs full, round and plump, skin yellow, dependent portions of head, neck, trunk and extremities present a purplish mottled appearance Thorax heart, yellow and softened, weight *nine and five-eighths* ounces Transverse muscular striæ indistinct, oil globules and yellow granular matter deposited in large amount, within and around the *muscular* fibrillæ of the heart Lungs normal, dependent portions congested Abdominal cavity liver yellow and enlarged Under the microscope, sections of the liver, with Valentin's knife, presented the characteristics of the yellow fever liver, immense numbers of oil globules of various sizes, and yellow granular matter deposited within and around the cells and capillary networks of the liver The liver also contained pigment particles, resulting from the preceding attack of malarial fever

Gall bladder The gall bladder contained 421 4 grains of thick, deep green, almost black, tenacious bile, which poured with difficulty and could be drawn out into long strings When heated the whole mass coagulated firmly, resembling in this respect albumin or liquid blood, colored by biliary matter Under the microscope the bile was found to contain an immense number of desquamated cells from the mucous membrane of the gall bladder, also colored blood corpuscles and masses of hematin Mucous membrane of gall bladder greatly injected and discolored, of a deep purplish and greenish color When held up to the light a dense network of deep purple and black congested capillaries and blood vessels were everywhere discoverable Solid coagulable matters in 421 4 grains of bile, grains 77 4, solid matters in 1,000 parts of bile, 183 67 The contents of the gall bladder were so thick and tenacious that it was impossible to introduce them into the ordinary specific gravity bottle

It is evident that hemorrhage had taken place into the gall bladder Stomach distended with black vomit, resembling dark fluid blood, the intestines also contained much black vomit, of a character similar to that found in the stomach The great depression of temperature, about 4 degrees F below the normal standard, which characterized the last twenty-four hours of life may have been due to the profuse hemorrhage into the stomach and bowels Under the microscope the black vomit from the stomach presented nothing more than mucus corpuscles, desquamated cells from the gastric mucous membrane, broken capillaries, and immense numbers of colored blood corpuscles I observed no vegetable nor animal organisms Their absence appeared to be due chiefly to the depressed temperature of the surrounding atmosphere Kidneys engorged with blood, when divided and washed, they presented a yellow color like that of the liver Weight, seven and one-eighth ounces Chemic analysis showed a great increase of oil in the structures of the kidneys, as well as of the heart and liver When sections of the kidneys were made with Valentin's knife and carefully examined under the microscope, the Malpighian corpuscles and tubuli uriniferi were found to be impacted (literally stuffed) with detached cells, oil globules and yellow granular matter The urinary bladder contained only two fluid drachms of urine, which represented the whole amount of urine excreted by the patient, during the last twenty-four hours of life The urine contained albumin and numerous casts of the tubuli uriniferi, filled with yellow granular matter and oil globules, also cells from the pelvis and ureter, and from the mucous membrane of the bladder The urine contained, also, little or no bile and presented a yellowish red color

In this case the disease was contracted at the jetties near the mouth of the Mississippi River, where fever prevailed to a limited extent among the laborers, late in the season One or more barges upon which the workmen slept at night became infected, and it was found necessary to destroy them by fire

(To be continued)

SOCIETY PROCEEDINGS

American Electro-Therapeutic Association

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept 25, 26, and 27, 1894

William J Herdman, M D, President

(Continued from page 491)

Prof A E Dolbear, of Tuft's College, Boston, read a paper on

PHYSIOLOGIC EFFECT OF THE CURRENT

In the early days of electrical applications to therapeutics no one knew what to expect At best it was thought that electricity was a very mysterious something with limitless possibilities, but unless the patient could feel its effects it was thought nothing happened Again, it was held that electricity was electricity, and induction coil discharges which could be felt were proper for all sorts of diseases when it could be applied As there were no units, no one knew what or how much he was giving or taking

The cautious physician very properly would not venture to employ an agent he knew little or nothing about, while the quack with his mysterious machine and wise look, often succeeded in inspiring his patients with confidence in himself and a high degree of expectancy which, as every physician knows, are of high therapeutic value for the larger number of ailments he is called upon to treat He therefore sometimes surprises himself and others by his success where they had failed, and electricity got all the glory for success while the failures were never counted

Now that one may know exactly the nature of the current he uses as well as its quantity, the successful application to physiologic purposes has begun in an intelligent way

At the outset one has to make the inquiry whether electrical action in the body and out of it are or not radically different Are there physiologic conditions which dominate, or is electricity in the body as well as out of it, subject only to its own laws?

The physiologists and biologists have quite given up what was called "vital force," and stoutly maintain that in the last analysis all physiologic processes are physical and chemical If that be granted then one may start with the assumption that the only difference in the action of electricity in a living body and out of it, are differences in the degrees of complication I believe that it is conceded among physicians who have studied the physiologic effects of electricity that the immediate effects are altogether physical and chemical

Assuming this to be true, one may inquire what are the physical and chemical effects of electricity, in order that he may look for them in physiologic processes

1 A current of electricity always heats the conductor through which it goes, and this quite independent of how much work of other sorts may be done in the same circuit Whether it be turning a motor or lighting an arc or incandescent lamp, or decomposing a chemic compound, or any other, these simply cut down the current in their circuit, and the heating power is proportional to the square of the current So one may conclude that when an electrical current is sent through any part of the body, that part is more or less heated With such currents as are employed in everything except perhaps in electrocution, the heating effect is so small as to be wellnigh ignorable A current of 1 ampere in a resistance of 1 ohm will raise the temperature of a pound of water only one hundredth of a degree in a second, but the resistance of the body is to be reckoned by thousands of ohms and the currents employed in thousandths of an ampere A current of 10 milliampères or the hundredth of an ampere through 1 ohm would heat it only one ten thousandth of one hundredth, or the millionth of a degree in a second, or, to state it in another way, would require nearly two weeks to heat a pound of water 1 degree

2 A current will produce light, as is evidenced in the arc and incandescent lamps, but the light is the effect of the higher temperature, for it is the carbon raised to incandescence which is the cause of the light and as the heating effects are so minute no luminous results due to incandescence can be expected in physiologic applications There is another kind of luminousness observed in rarified gases when alternating currents of high voltage are sent through them, but they are not observable in solids and liquids and there is no evidence that there is any corresponding physiologic effect

3 A current may bring about chemic decomposition A typical case of this is the decomposition of water To effect this an electro-motive force of as much as 1½ volts is necessary, as the electro-motive reaction of water composition is 1½ volts When a single cell such as any of the ammonium chlorid cells is employed directly for physiologic purposes, water decomposition can not be expected, but where the same cell is used with an induction coil the voltage which comes from the secondary cell with hundreds or thousands of turns may be reckoned by the hundred In this case water would be fully decomposed at both electrodes, both oxygen and hydrogen being set free If there were no other substance than water present, these elements would at once be re combined so that no collection of gas would be observable, nevertheless there is every reason to believe that even here the same hydrogen and oxygen would not be combined into a given molecule, but the decomposed molecules would have changed partners In the presence of other substances than water there is every reason to expect other combinations at both poles and what the product would be would depend upon what substances were present at the places, also their looseness of chemic structure The substances of the electrodes themselves might be attacked as, for instance, copper or silver might be slightly oxidized and hydrogen freed or not, depending upon the quality and conditions of the adjacent molecules The point here is that one must *not assume that chemic decomposition of water does not* take place because he can detect no evidence of free oxygen or hydrogen Whenever a current can enter the body it enters it through its fluid conductors, chiefly water, dried tissues of all sorts being non-conductors

4 An electric current will make a magnet, or rather it is a magnet itself The current in a conductor of any kind endows the substance of the conductor for the time with all the qualities of magnetism It possesses a so called magnetic field with either tension concentric with it, and a magnetic needle tends to set itself at right angles to it, and this is as true for the body or part of the body through which a cur-

rent goes as it is true for a piece of copper or iron wire If the current be a continuous one, such as one gets from a battery, the needle will indicate it by swerving from the meridian If it be an interrupted or alternating current the needle may show no sign of movement because it takes time for it to move, and if it be solicited to move in one direction and before it has had time to turn it be solicited to move in the opposite direction it will stand apparently still, but it would be wrong to infer that the needle was unaffected With such small currents as are used for physiologic purposes such magnetic effects would only be observed by working with delicate needles

The magnetic field, whatever its source, reacts in some degree upon all kinds of matter within it Upon what we call magnetic substances such as iron, nickle and cobalt it acts to set them in positions in its own lines All other substances are set in positions at right angles to these These phenomena are known as para magnetic and dia magnetic phenomena Excepting iron and nickle, these effects are weak with ordinary currents and at ordinary temperatures but they are exalted at low temperatures What I would emphasize is that in a magnetic field all kinds of molecules are acted upon by a pressure tending to twist them into new positions and this must be true in the body of a living thing as it is for things external to it If on account of opposite pressures a given body does not move at all then is it subject to what in mechanics is called a strain Its form has been more or less distorted As I am not now concerned with amounts of distortion or changes in position it does not matter whether the actual quantity be of one value or another By coiling a wire through which an electric current flows, the magnetic field of a greater length is concentrated within it and the effects are correspondingly increased, but they differ only in degree from that shown by any part of the circuit With a constant current from any source to provide a magnetic field, with or without coiling the conductor, or with a permanent magnet of any form, the field is a constant stress and acts upon all bodies in it in some degree As doubtless you are all aware, there have been many attempts to discover this field by sensation Lord Kelvin tried it years ago and expressed some surprise that there did not appear to be a magnetic sense

Peterson and Kennelly have more recently tried it with exceedingly strong fields and they have concluded that "the human organism is in no wise appreciably affected by the most powerful magnets known to science"

As to such conclusions I would suggest that the explanation of the failures to perceive any effects might be attributable to two causes

1 A magnetic field acts upon molecules, not upon physiologic organs as such There is no tendency to twist, warp or strain a muscle as such and hence sensory nerves for muscular movement would have nothing to report

2 A constant stress of light value does not give rise to sensation for ordinary mechanical causes Lay the arm carelessly and without looking at it, on the table where it can be comfortable and for a short time turn the attention to other matters Then without looking at the arm or moving it in any way, see if you can tell how the fingers are crooked, or which ones touch the surface of the table Not until some muscles be moved can one tell what shape his hand is in and yet it has been subject to constant pressure all the time For this reason then, that a constant pressure producing no movement ought not to be expected to give a perception, I am not surprised at the results reached

3 A magnetic field, whether constant or varied, has no chemic effect It does not bring atomic changes Such changes require energy of a different sort and any nerves whose function it was to respond to chemic changes would not find anything to report from a magnetic field

As for the brain itself which has been exposed to the strongest available magnetic field for considerable lengths of time with no results noted, I would ask why one should expect sensory results from an organ which is itself not sensitive? Can not the brain itself be dipped out with a spoon without sensation? Sensation implies nerves, and particular sensations particular nerves, and there are no substitutions Neither the white nor the gray matter possesses nerve cells If the brain were affected by a magnetic field, I should expect it would need to be detected by other means than by the direct sensation I therefore conclude that the experiments alluded to prove that magnetic effects do not produce the mechanical and chemical changes necessary for sensation, rather than they are absolutely without any effect This latter conclusion, if adopted, would at once demand the acceptance of the proposition that electrical effects are not the same within the body as they are without, and that would necessitate in physiology the revival of a vital force or something like it

4 An electric current in a given conductor induces another electric current in an adjacent conductor It does this by virtue of the magnetic field which it forms about itself and a moving magnetic field, however originated, acts in the same way, to set up an electric current in neighboring conductors The so called induced current lasts no longer than the field, is changing in strength, and quite stops when the field no longer changes no matter how strong the latter may be Hence it is possible to set up electric currents in any conducting body without having any electrical conductor between it and a primary source of electricity This is the principle employed in telegraphing without wires between two points Whether such a method has any physiologic importance I do not know, but I should think it might sometimes, where currents of particular frequencies or character are desirable and not so easily to be had with an electro magnetic breaker as in the ordinary induction coil In another way it has some theoretical interest It has been reported that anesthesia may be brought about by subjecting a part of the body, a finger for instance, to an alternating magnetic field This, observe, is not sensation but the absence of it, there is nothing in the reports of the experiments with magnetic fields to show that tests of sensitivity were tried, they were probably not tried in any

Now, I believe it has been demonstrated that alternating electrical currents at some unsettled but very high rate of alternations can for the time being destroy sensation, so that I say a tooth may be pulled without pain If there be nerves of sensation in an alternating magnetic field, and they be made a part of an electric circuit as they very well may be made, then changes of magnetic polarity may bring about current changes in the organism and these may have any of the results that belong to currents and if currents under any conditions will produce insensibility then the effects between magnetic poles will be due, not to the magnetism itself but to the currents of electricity which the magnetism induces

I have heard it objected to the view that magnetic fields could produce any physiologic effects that, if so, those who work with alternating currents of electricity and especially such as are near dynamos and motors would have noticed it, yet none have ever reported it If, however, the real effect was one to lessen their sensitivity in general, one would hardly expect one to know anything about what had happened without comparisons Experiments need to be made for all the nerves Can one see or hear or taste or smell or touch as acutely in such a varying magnetic field or with alternating currents as he can without them?

If there is anything at all in this anesthesia by currents without bringing on tetanus, I should suppose it would have a wonderful field For instance, in sensickness there could be found a current of some degree and frequency that would be quite insensible to the feelings, which would prevent at once the nervous condition, and an electrical device could be worn continuously on shipboard without discommoding one The chief difficulty, I should suppose, would be to find the proper route for the provided current If, for instance, the immediate cause of sensickness be, as I have somewhere read, the movements of the fluid in the semi circular canals, then electrodes might need to be fixed in the ears

Then again, it is now well known that electric currents are generated in the body by the contraction of muscles as well as well as by chemic action wherever these may take place These currents are exceedingly weak, too weak to be able to do any of the wonderful things that are alleged to be due to them by so called "magnetic" healers It requires the most delicate apparatus we have to detect them at all, nevertheless, an electric current always has direction and a conducting circuit The query is Which are the conductors in the body? The nerves have often been compared to conductors and some have thought that the impulses in them called "nervous transmission" were electric currents, on the other hand, the measure of the rate of impulse has been found to be so low—less than a hundred feet a second—that some have concluded that such nervous current could not possibly be electrical, inasmuch as the velocity of electricity is reckoned to be so great This has never seemed to me to be conclusive The old experiments on the velocity of electricity did not measure that at all They at best indicated the rate of flow of a certain amount of electrical energy, which is a different problem If a conductor be a poor one it may take a good while to get enough electricity through it to produce any observable result, and that I think, is the case with the electric conductivity of a nerve Aside from the nerves, there are the blood vessels filled with good conducting materials, muscular tissue of various kinds not so good, and fatty tissue almost non-conducting, so that what will be the route of an electric current between two points in the body, may not be the same in different persons I should expect that a given current would be much the densest in a lean or muscular person and much scattered by adipose tissue, even a large surface electrode of a square foot which will carry a current of 22 milliampères without injury to the surface itself might, on account of the slight conductivity of the underlying tissues, be made destructively dense in some portion of its course I can not give an example but think it probable

And last, but not least, what may be said of electricity as a curative agent? If one can not give a technically correct description of electricity itself yet this we do know, that an electric current is the bearer of energy in such a form as to be readily available for mechanical, chemical or magnetic effects, and which of these will be the result depends altogether upon what kind of mechanism is provided for it Inherently, electricity has neither curative nor destructive qualities I do not think there is any evidence that it attacks life or that in any sense it is life, as some have thought One might as well say that heat is life or chemism is life Electricity has directly to do with molecules and atoms It can shake molecules apart and permit new molecular arrangements If these new products chance to be useful or harmful to the organism it will be benefited or injured The particular advantage, which is a very great one, is these products may be produced where they are wanted This is now practically applied in electrolytic and catalytic adaptations Its electro-tonic action may be due more to the electrolytic products at nerve terminals than to their direct excitation Considering a nerve as a conductor, its quality does not depend upon its conductivity but its conductivity depends upon its quality It is not quite as probable that if for any reason nerve action is judged to be slothful it is due to the fact there is nothing to conduct, that is, the metabolic changes at the nerve terminals are not rapid enough, as that the trouble is due to the nerve itself? This upposes the nerve to be intact

I can not forbear to allude to a matter of high theoretical nterest directly related to electro-therapeutics Since it as been practically demonstrated that what we call light is set of ether waves of electro-magnetic origin, it has been pparent to some, though others have not seen the significance of the work, that we are compelled to postulate that ll atoms are magnets, seeing that all can and do give lectro-magnetic waves There was a good deal of reason or thinking so before This new evidence seems to compel ne to assume it Hence, on this assumption, it follows hat the living body is but a combination of an enormous umber of atomic magnets I use the term atomic advisedly, or molecules are but combinations of atoms, and their roperties are only the resultant properties of the atoms hat make them up Every movement of every molecule nd atom in the body is, then, a magnetic movement in agnetic fields and must induce magnetic and electric hanges all about it It was long ago shown by Faraday hat electric and chemic changes were quantitatively reated Now it is seen that electro-magnetism underlies all hemic action The significance of it here lies in the fact hat in working with electricity to effect physiologic changes ne is really at work with the fundamental factor in physiologic energy Not in a roundabout but in the most direct ay

Functions of all sorts are electro-magnetic in the last nalysis, and he who understands these and the art of proprly applying electro-magnetic energy to languishing or disased organs will be able to do all for humanity that skill an do The more I study the relation of life to the things pon which it depends, the more I am persuaded that though eath may be for the benefit of the race, it is not necessary or the individual

DISCUSSION

Dr J H Kellogg said that the paper was very suggestive or future research, but as the ideas presented were largely heoretical, we should, before accepting them as facts, suplement them with physiologic and other experiments ome experiments that had been made showed that muscles ere electrical accumulators—they could be charged by ontact and discharged by contact or induction If these xperiments were confirmed they would go far toward coroborating the statements made in the paper

Dr Morton said he would like some further light in regard to the electro magnetic molecule Did the author mean by that the chemic affinities which were taking place and which constituted the sum total of life, or did he mean that we should consider each molecule as showing a certain amount of polarity, and yet not necessarily associated with chemic affinity?

Professor Dolbear said that in his paper he had asserted that we had been compelled to assume that atoms and molecules were magnets, and that there was a good reason for thinking so before the experiments by Maxwell and others had forced this conclusion upon us All were probably familiar with the experiments that had been made recently regarding the conductivity and magnetic changes At absolute zero the conductivity was an infinite quantity—there was no resistance—and the graphic representation of the conductivity of the body was a straight line At zero the chemic affinity was at zero, hence chemic affinity would seem to be a necessary outcome of temperature He did not understand that magnetism had necessarily anything to do with chemic affinity—he would entirely disassociate the two

The President remarked that though many of the statements in the paper had been characterized as theoretical, they were largely founded on physiologic facts

(*To be continued*)

SELECTIONS

Non-Surgical Treatment of Hemorrhoids —The *Gazette des Hôpitaux* lays down the following indications of hemorrhoids which should not be operated on 1 Symptomatic hemorrhoids, sometimes due to stricture or cancer of the rectum, to affections of the prostate, bladder or urethra, sometimes they are caused by a gravid uterus, a fibro myoma or an ovarian cyst pressing on the pelvic veins, again, they may result from cirrhosis of the liver In all these cases the primary cause should be treated, an operation is at least useless if not dangerous, 2 Hemorrhoids without any important symptom Some patients experience neither uneasiness, pain nor hemorrhage They are obliged to watch the condition of their bowels, but are not otherwise incommoded, 3 The most important class for non interference with the knife is the prolapsed, strangulated or prolapsed These are really cases of infectious phlebitis and an operation is not without danger In all cases the patient should adopt certain prophylactic measures All irritation of the anal region should be avoided, constipation, with a large hard stool, should be controlled by appropriate diet, the use of laxatives, etc, the bowels should be moved as nearly as possible at a certain hour so as to induce regularity and should be followed by ablutions of warm water, either plain or borated Injections of boric acid are recommended as controlling congestion as well as facilitating defecation If small bleedings occur it will be useful to give large injections of water at 40 to 45 degrees and local applications of sponges or tampons of water at 50 degrees If the congestion is prolonged, if there is inflammation and danger of gangrene, hot applications are indicated, but it will be found well to employ certain topical agents—either calomel or tampons saturated with glycerin 35 grams, iodin 20 centigrams to 1 gram, iodid of potassium 2-5 grams The applications are slightly painful and it is best to begin with the smaller proportion of iodin The use of soothing ointments is often indispensable—the old-fashioned poplar ointment answers very well It can be associated advantageously with belladonna and antipyrin—*e g*, poplar ointment 30 grams antipyrin 2 grams, extract of belladonna 1 gram Irrigations with laudanum or antipyrin also give excellent results The oozing and irritation which often complicate external hemorrhoids usually cease with cleanliness and the use of boric acid solutions It may be well to use between the irrigations a pad of cotton impregnated with borated vaselin or to powder the part with some inert absorbent powder, such as subnitrate of bismuth

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SATURDAY APRIL 6 1895

DAMAGED BY FIRE

March 31, being Sunday, the employees of this office were enjoying that rest which all good people enjoy on that day It so happened that in the afternoon MR R A HAMILTON went to the JOURNAL office on an errand for the Editor He was in the office a few minutes, found the papers of which he was in search, closed the iron door, and started home, going down the stairway he smelled smoke, and he looked carefully on each landing as he passed, finding the smoke grow thicker, and on reaching the first floor found the stairs themselves on fire He ran to the basement, called the engineer of the building and had the alarm sounded In four or five minutes the entire hallway and stairs were wrapped in flames, and sheets of fire rushed out of the windows

The insurance patrol responded quickly, and in less than six minutes from the time of sounding the alarm, the JOURNAL presses, the machinery and type were covered with tarpaulins The fire engines were playing on the fire in the hallway in about ten or twelve minutes

Two of the Trustees and the Editor arrived in about an hour to find the fire practically extinguished but the office was flooded with water, the desks and movable furniture about six to eight inches deep in water, much type "*pied*" and manuscripts water-soaked

The JOURNAL, nevertheless, appears on time, the loss is nearly covered by insurance, and our members may well be thankful that the situation is no worse Our employees have been obliged to work in a room without heat, and in much discomfort But for the timely discovery of the fire the loss would have been complete

This is the second time the JOURNAL has suffered by fire The printing firm of BLAKELY & ROGERS had in 1888 the contract for press work, and a fire broke out which caused serious damage *On that occasion* the forms were destroyed and only a portion of the paper could be made ready in time for the weekly issue

THE NEW YORK COUNTY INSANE AND EPILEPTICS

The pauper insane of any locality would seem to have a poor outlook, when those whose duty it is to advocate their interests sneer at others who volunteer on behalf of those interests The State Charities Aid Association, now in its twenty-third year of proposed support of the charitable operations of the State of New York, has apparently adopted the role of apologists to those who run the institutions of the metropolitan city In its last annual report the "whitewash" is applied as follows "It would be useless to repeat *facts* which have been dinned into the ears of the public for several months past with regard to the many deficiencies of our city asylums" The fact that the charitable and correctional institutions are under one commission is adduced as one of the reasons why these facts exist, when the truth is that in years gone by the one commission, when in the hands of other men, conducted wellnigh faultlessly the affairs of both the sick and the criminal The inference is that the men who get appointed to the commission are not large enough for their work, or are giving their time to less important matters, they should be divorced from ward politics and be required to personally visit the institutions under their charge The Annual Report, from which the above is quoted, adverts to the progress that has been made toward the establishment of a colony for epileptics It thus refers to the philanthropist, after whom the colony will be named

"The late President, of your Board, MR OSCAR CRAIG, died on Jan 2, 1894 MR CRAIG was not a member of this Association, he was not a resident of this city, but he used his high and honored official position to strengthen the hands of all who are striving to raise the down-trodden and succor the helpless For this is what he did himself The insane, the prisoner, the poor epileptic found in him a friend, ready at all times to do battle in their behalf with voice and pen Strong in his singleness of purpose, his great moral courage and extraordinary industry, gentle, because so strong, just, because so true, these qualities made MR CRAIG a power for good He was the firm friend of this Association, using his great influence to promote our reform measures, however unpopular, when once satisfied they were beneficent of purpose and sound in principle Nor did he ever lose an opportunity of bearing public testimony to the value of organized volunteer aid united with official service, illustrating it by the work of this Association in connection with that of his own Board The last occasion on which Mr Craig addressed a public audience was in Chicago, at a Congress of the World's Fair, and the last words uttered by him there were to urge the formation of State Charities Aid Associations in every large State in the Union

Mr Craig did not live to see established the State Colony for Epileptics, to which he had given so much time and thought As Chairman of the Committee of your Board which selected the site, as author of the bill of the Association, introduced in 1893, and as one of its most earnest supporters in the Legislature, he was so identified with this great reform that when our bill to establish the Colony was introduced a second time, in 1894, a few weeks only after Mr Craig's death, we gratefully paid him the highest honor in our gift by naming after him the State Colony for Epileptics That the original suggestion should have come from the Governor of the State is an additional tribute to Mr Craig "

THE CRIMINAL USE OF CHLORAL

This Journal has from time to time adverted on the necessity for some general legislation to prevent criminals from purchasing deadly drugs, and recently the use of chloral by criminals for criminal ends has been made the subject of an investigation by the captain of that notorious New York precinct called "the Tenderloin " Having been informed that the so called "knockout drops," that have the name of completing the work of alcohol in the operations of thieves who desire to stupefy and afterward clean out their partially intoxicated victims, contain chloral, Captain Pickett has sent out a detective to investigate the sale of chloral and other stupefying drugs He has found that it is altogether too easy to purchase chloral at the drug stores He is inclined to regard the law relating to the purchase and possession of poisons, as weak and not up to date, for the reason that it does not provide for the detention or punishment of persons having the "knockout drops" in their possession, who may have been arrested on suspicion He states that the offense is grave enough to make it a *felony to the* person on whom is found the drug for any unlawful purpose The druggists who sold chloral indiscriminately to the detective will be prosecuted A case of death has recently been held to be referable to these "knockout drops "

TO CHAIRMEN AND SECRETARIES OF SECTIONS

Section officers are respectfully requested to send their completed program to the Journal at the earliest practicable date, and no later than April 17 The program will hereafter be printed in the Journal office, and it will appear in full in the Journal of April 20

PHOTOGRAPHS OF MEMBERS

We have received a great many photographs of the members of the Association, but nevertheless a very small percentage of the whole membership We wish to have the collection as complete as possible, and therefore respectfully request those who have not done so to send their picture by return mail

Do not forget the Journal Special Train leaving Chicago Sunday, May 5, from Pennsylvania depot, 3 15 ~~A~~ P M Write for space desired

BOOK NOTICES

A Course of Elementary Practical Bacteriology, including Bacteriologic Analysis and Chemistry By A A Kanthack M D, M R C P and J H Drysdale, M B M R C P Pp 181 London and New York Macmillan & Co 1895

This manual is a hand-book for the bacteriologic laboratory written by practical workers The matter is logically arranged, and carefully pruned of unnecessary words Each subject is made easy by every detail being explained, no step of any ordinary procedure is left in the dark There are three parts Part *I* is on General Bacteriology (16 lessons), Part *II*, Bacteriologic Analysis (12 lessons), Part *III*, Bacteriologic Chemistry

We commend this laboratory guide to practical students in the highest terms

E Brissaud, Lecons sur les Nerveuses (Saltpetriere 1893-1894) recuellies et publices Par Henry Miegs, avec 240 figures (schémas et photographies) Paris G Masson, 1895 Pp 644

On the death of the lamented Charcot, M Brissaud was called to occupy provisionally the Chair made famous by the great master

There are thirty lectures in this volume, of the seventy lectures of the course, which are carefully prepared, and very interesting Of these lectures the first is devoted to a eulogy of Charcot, touching in its tenderness, and broad in its understanding The other chapters are I to II Charcot's Disease (Lateral amyotrophic sclérosis), III to IV, Friedreich's Disease (cerebellar hereditary ataxia), V, Paraplegia Ataxo-spasmodic and Tabes Combined, VI, Little's Disease and Dorsal Spasmodic Tabes, VII, Paraplegias of Potts' Disease Prognosis and Surgical Treatment, VIII, Hematomyelia and Sudden Paraplegias, IX, The Reciprocal Relations of Hypertrophic Cervical Pachymeningitis and Syringomyelia, X, Syringomyelia, Histology, Metamerism of the Sensory Centers, XI, Spinal Syphilis, XII, Spinal Hemiparaplegia with crossed Hemianesthesia, Syndrome of Brown Séquard, XIII, On the Abolition of the Muscular Sense and on the Sign of Romberg, XIV, Tabetic Arthropathies and Sensory Troubles, XV, Trophic and Sensory Disturbances, XVI, Exterior forms of Myopathy, XVII, Ophthalmoplegia in General, XVIII, Orbital and Subpeduncular Ophthalmoplegia, XIX, Intrapeduncular and Nuclear Ophthalmoplegia, XX, Neuritic Ophthalmoplegia and Neuritic Muscular Atrophy, XXI, Spasmodic Laughing and Crying, XXII and XXIII, Pathology and Symptoms of Parkinson's Disease, XXIV, Tics and Clonic Spasms of the Face, XXV, On Aphasia of Articulation and of Intonation, in connection with a Case of Cortical Motor Aphasia without Agraphia, xxvi, Sensory Disturbances in Hemiplegia of Cortical Origin, xxvii, Syndrome Cerebellar, xxviii and xxix Basedow's Disease—Exothyropexy, xxx, Myxœdema, Cretinism and Infantilism

The profound scholarship and vast experience displayed in these lectures not only prove that M Brissaud is not unworthy to succeed Charcot, but that he is able, eloquent and conscientious No more interesting lectures have ever been written on this subject, than those in the volume of M Brissaud We have to thank him for one of the most instructive and entertaining books of the year

PUBLIC HEALTH

Obligatory Vaccination Abolished —Obligatory vaccination is to cease in the Canton of Berne, Switzerland An election just held showed that the anti vaccinists cast 26,238 votes against 24,513 by their opponents

Vanillism —M Guerin Officer of Health for the Colonies, reports—*Rev Int Med Prat*—that since the researches of Layet, two sorts of vanillism are recognized—the alimentary, with choleriform symptoms produced by eating vanilla ices, and the professional The latter is due to the odoriferous principle of vanilla, or vanillin, and may give rise to cutaneous symptoms—pruriginous exanthemata, with coryza and blepharitis—or to nervous symptoms—cephalalgia, vertigo, muscular pains, genesic excitation, etc The author thinks that the vanilla factories should be under governmental supervision, both as to the hygiene of the factories and as to the selection of the workmen

State Supply of Diphtheria Antitoxin —Under date of March 25, the Massachusetts State Board of Health announces that it has prepared a supply of antitoxin for the benefit primarily, of such communities in the State as find it difficult or impracticable for any reason to supply themselves with the new agent from reliable sources The Board does not propose to offer it for sale, but its gratuitous distribution will be under strict surveillance, designed to prevent waste and produce the most beneficial results There is also pending a bill in the Illinois State Legislature providing for an appropriation of $25,000 to enable the State Board of Health to engage in the production of the antitoxin Until each State is prepared to supply guaranteed vaccine—an agent whose value has been proved by almost a century's experience—it is doubtful how far this new departure may wisely be carried The Journal is quite clear, however, as to the propriety and wisdom of State supervision over the production and distribution of both these agents

High February Death Rate —There was a phenomenal increase in mortality from acute lung diseases in many sections of the country during the month of February, 1895, as compared with the mortality from the same diseases for the corresponding month of 1894 In Chicago there were 444 deaths from pneumonia, 226 from bronchitis and 61 from influenza as against 118, 74 and 7 for the previous year, the totals for the group were 731 and 199 respectively—an increase of more than 267 per cent February,1895 The Bulletin of the New York State Board of Health also shows an increase, but not so marked, for that State There were 10,751 deaths reported during the month, which is about 1,400 more deaths than occurred in the same month in 1894, an increase of about 15 per cent The Bulletin shows that the febrile or zymotic diseases have lower death rates except whooping cough and typhoid fever, the increase of the latter disease being confined to the Hudson Valley districts, where there was an unseasonable prevalence, especially in Albany Smallpox caused 5 deaths—52 in February, 1894—4 in New York and 1 in Brooklyn, it does not exist in the State outside of the metropolis Consumption caused 1,150 deaths, which is excessive for the month and is due to the influenza epidemic which has increased its mortality

Morbidity in Austro Hungary —From official figures just published, the *Bulletin Medical* is able to give details of the infectious diseases in Austro-Hungary in 1892 and 1893 Variola has become rarer, the number of cases is 60 per cent less than in 1880, when they numbered more than 50,000, the deaths decreased from 8,385 to 3,735—or more than 50 per cent This good result is due to more frequent vaccinations and re vaccinations The mortality for vaccinated patients with variola was one half of 1 per cent per 1000 of the population, for non-vaccinated one third Scarlatina has since then increased and the same is true of diphtheritic croup Measles is a little less common and seems more benign Typhoid fever is more common, or perhaps it is reported more often, it causes about 15 per cent of the morbidity Typhus and dysentery have become rare Puerperal fever is more frequent and has been fatal in more than half the cases reported The same official report shows that at the end of 1893 there were in the Empire 6,728 physicians, 1,421 surgeons and 8,119 other persons engaged in the healing art The number of physicians increased 163 and the number of surgeons decreased 111 from the figures of the preceding year The number of midwives is increasing At the end of the year mentioned there were 17,810 engaged in practice

Condensed Milk —It is decidedly refreshing in these days of sanitary scares and sensations to meet with such a common sense and encouraging utterance as that of Prof Albert Leeds, chemist of the Stevens Institute of Technology, on the subject of condensed milk In consequence of sundry sensational newspaper items on the subject, published last summer, the Professor was requested by the New Jersey State Board of Health, and by some local boards, to investigate the various brands—some fifteen in all—of condensed milk in the market, and his report is now made public in the current number of the *American Journal of the Medical Sciences* As was to be expected, some of the specimens were condemned—more particularly those which had undergone changes due to specific bacterial ferments getting into the milk before the process of condensation But instead of making these the theme of a general hysterical condemnation of all condensed milk, the analyst sensibly points out that the interests of the public coincide with those of the manufacturers in most respects, and that, apart from the propriety of its use for infant nutrition, much can be said in praise of the great value of condensed milk as a manufactured product He says that it would be a great loss to the canners were they to use or purchase watered milk, since the chief expense of the condensation is in the evaporation of the water, and dairymen dishonest enough to water milk are those most likely to have impure wells, improper food and unclean surroundings Not from added water, but from water used in washing utensils is danger to be dreaded, and the same remark is true of the original milk itself It is out of the question, Professor Leeds says, for a canner to employ a bacteriologist to examine the milk used, and the hardening and putrefactive changes which the condensed milk sometimes undergoes are usually due to failures in cleanliness etc, at the dairy Later on the canner will participate with the public in the great benefits of a rigid system of inspection that will first of all, begin with the dairy and the cattle themselves The Journal is aware that, as a result of municipal milk inspection in many large cities, the dealers themselves are the most efficient agents in keeping the producer up to the mark They not alone have frequent

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analysis of their supplies made by the municipal analysts but many dealers employ appliances for milk analysis in their own depots, and are thus enabled to detect promptly the grosser forms of adulteration and to locate the responsibility

Health Reports —Sanitary reports received by the Supervising Surgeon-General of the Marine-Hospital Service

SMALLPOX—UNITED STATES

Illinois Chicago, month of February, 95 cases, 29 deaths, March 1 to 27, 67 cases, 31 deaths

Kentucky Paducah, March 24, 1 case of smallpox taken from Str *Joe Fowler*, from Evansville, Ky

Michigan Watson Township, March 13, 1 case, Ypsilanti, March 13, 1 case

New Jersey Jersey City, March 27, 1 case

Pennsylvania Pittsburg, March 27, 1 case taken from cars en route from Cincinnati to Baltimore

Tennessee Memphis, March 24, 1 case reported at the U S Marine-Hospital

West Virginia Wheeling, March 27, 2 cases

SMALLPOX—FOREIGN

Arabia Aden, February 9 to 23, 6 cases, 1 death

Belgium Brussels, March 2 to 9 2 deaths

Brazil Rio de Janeiro, February 23 to March 2, 5 deaths

Cuba Havana, March 1 to 27, 1 death

Egypt Alexandria, February 19 to 25, 1 death

England Leeds, March 9 to 16, 2 cases

India Calcutta, February 9 to 16, 73 deaths

Italy Trapani, under date of March 8, 1895, the United States Consul at Palermo, reported an outbreak of smallpox at Trapani

Mexico Nogales, March 16 to 23, 2 cases

Netherlands Rotterdam, March 9 to 16, 10 cases, 4 deaths

Russia Batoom, February 26 to March 5, 8 cases, 4 deaths, Odessa, March 2 to 9, 3 cases, 2 deaths

Switzerland Basel, March 2 to 9 7 cases

Uruguay Montevideo, January 12 to 23, 7 cases

CHOLERA—FOREIGN

India Calcutta, February 9 to 16, 39 deaths, Madras, February 15 to 22, 1 death

YELLOW FEVER—FOREIGN

Brazil Rio de Janeiro, February 23 to March 2, 8 deaths

Cuba Havana, March 14 to 21, 5 cases, 1 death

Mexico Vera Cruz, March 14 to 21, 1 death

Rio de Janeiro, March 5, 1895

I have the honor to transmit report for week ended March 2, 1895

There were 19 deaths from accesso pernicioso, an increase of 14, 8 from yellow fever, the same as in the foregoing week, 5 from smallpox, a decrease of 2, 7 from beriberi, none in the last week, 1 from enteric fever, a decrease of 4, none from cholera 1 in the previous week, 7 from diarrhea, suspected to be cholera, as against 3 in the former week, which were given with various equivalent names There were 335 deaths from all causes, being an increase of 39, and the largest number during any week in this season This was to be expected, as we are just at the time of greatest mortality of the year, and when there is an epidemic of yellow fever it is always at its greatest in the first week in March

Yellow fever I think we may safely consider that there will be no epidemic of this disease this year, as the cool season is very near, and whenever there has been no great number of cases of this disease up to this time, it has never appeared to any great extent

Cholera I have heard of only one suspected case during the week, which was removed to Jurijuba Bay, and the usual disinfection practiced Along the line of the Parahyba River to its mouth a little beyond Campos, the disease appears to be finishing In the city of Campos they say it is extinct But it has appeared in some intensity to the north of that river in the State of Espirito Santo, and is moving slowly northward In Cachoeiva in this State, from February 24 to March 3, there were 40 cases, 21 deaths In the village of Itapemerim there were 50 cases and only 2 deaths in the same time The reports of 20 cases in the hospital of the Insane Asylum here in Rio de Janeiro were false, as I was informed by Dr Carvalto Bulhões of the Health Department of the Government

Beriberi This disease always appears more or less toward the end of summer, which may account for the 7 deaths from it during the week

Smallpox This disease is continuing, though in small number, during the whole summer, an unusual occurrence, I hope it does not foreshadow an epidemic during the approaching winter season

R Cleary, M D, Sanitary Inspector, M-H S

ASSOCIATION NEWS

The Baltimore Meeting

EXCURSION TO GETTYSBURG BATTLEFIELD AND PEN MAR

In compliance with a widely expressed desire on the part of members of the Association to visit the historic battle ground of Gettysburg, the Committee on Transportation has arranged for a special excursion train to that place on the fourth day of the meeting of the Association The Western Maryland Railroad will furnish a fast express train for this excursion at the rate of $1 per passenger, provided 150 persons desire to take the trip Notice should be given at the registration office on the first day of the session George H Rohe, Assistant Secretary

American Medical Association—Section on Dermatology and Syphilography —Address of the Chairman, Alfred E Regensburger, San Francisco, Cal

"The Human Epitrichium and its Relations to some Congenital Skin Diseases," (also specimens) by A H Ohmann-Dumesnil, St Louis, Mo

Exhibition of Protozoa in three cases of Skin Disease, by T E Gilchrist, Baltimore, Md

First Symposium, Diagnosis and Treatment of Sycosis—Differential Diagnosis, Pathology, Local and Internal Treatment, by L Duncan Bulkley, New York City

Adenoma Sebaceum, by W E Maxwell, Portland, Oregon

Keloids, by A Ravogli, Cincinnati, Ohio

The Identity of Lupus Vulgaris and Erythematous, by Alfred E Regensburger, San Francisco, Cal

Lupus, treated by Galvanism (illustrated by photographs) by Merrill B Ricketts, Cincinnati, Ohio

Report of about twenty cases on the Pathology of Herpes Zoster, by T E Gilchrist, Baltimore, Md

Clinical Notes on Herpes Zoster, by W F Breakey, Ann Arbor, Mich

Syphilis—the Dangers of and how to avoid Them, by A S Garnett, Hot Springs, Ark

Syphilis of the Pharynx, by A Ravogli, Cincinnati Ohio

Four Recent Cases of Extra-Genital Syphilis in Private Practice, by L Duncan Bulkley, New York City

Syphilitic Specific Ulceration of the Rectum, by James P Tuttle, New York City

Cerebral Syphilis, by Frank P Norbury, Jacksonville, Ill

Conceptional Syphilis, by David H Rand, Portland, Oregon

Syphilis and Gonorrhea as an Etiologic Factor in Diseases of Women, by H R Holmes, Portland Oregon

Hereditary Syphilis, by G S Stein, Columbus, Ohio

Early Constitutional Treatment of Syphilis, and a few remarks on Local Treatment of Primary Stage, by W F Breakey, Ann Arbor, Mich

Those who have promised papers, but subjects not named are, Drs Edward Martin, Philadelphia Pa, James Nevins Hyde, Chicago, Ill, James E White, Boston, Mass, W A Hardaway, St Louis, Mo, R W Bishop, Chicago Ill, W T Corlett, Cleveland, Ohio, and Louis Frank, Milwaukee, Wis

Alfred E Regensburger, San Francisco, Chairman, David H Rand, Portland, Oregon, Secretary Executive Committee L Duncan Bulkley, New York, Louis A Duhring, Philadelphia, Pa, A H Ohmann-Dumesnil, St Louis

David H Rand, Secretary, Portland, Oregon

SOCIETY NEWS

Medical Association of Missouri —The thirty-eighth annual session of the Medical Association of Missouri will be held in Hannibal, beginning Tuesday, May 21, and continuing three days In order that the program may be arranged and printed and distributed throughout the State a week or ten days before the meeting, we ask and insist that you send the title of your paper to John H Duncan, room 100, Union Trust Building, St Louis, Mo, on or before May 1, 1895 Those who desire to read papers will bear in mind that the title of their paper must accompany the name of the essayist and that they must be in the hands of the committee before May 1 in order to get a place upon the program

J C Mulhall,
A L Fulton
J H Duncan,
Committee on Scientific Communications

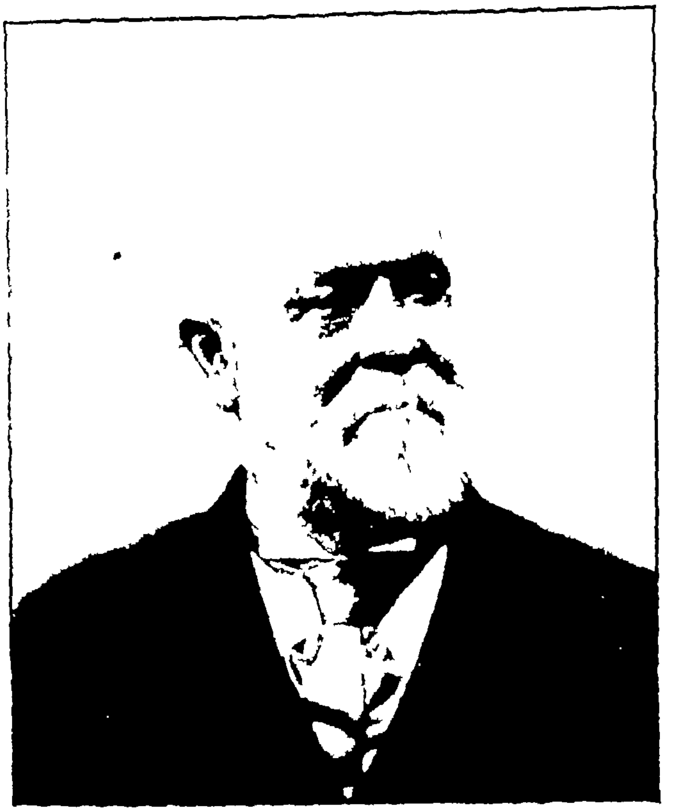
Medical Society of the State of Pennsylvania —The forty fifth annual meeting will be held in Chambersburg, on Tuesday, Wednesday, Thursday and Friday, May 21, 22, 23 and 24, 1895, beginning on Tuesday, May 21, at 9 A M

Address on Practice of Medicine, by J C Gable, York
Address on Surgery, by C L Stevens, Athens
Address on Obstetrics by W B Ulrich, Chester
Address on Mental Disorders, by F X Dercum, Philadelphia
Address on Otology by L H Taylor, Wilkes Barre
Address on Hygiene, by Hildegarde N Longsdorf, Dickinson
Report of Committee on Contagious Ophthalmia, by T A Lippincott Pittsburg Chairman
Report of Committee on Pharmacy by Adolph Koenig, Pittsburg, Chairman
Report of the Legislative Committee, by J C Gable, York, Chairman
Report of the Committee on Increase of Membership, by C L Stevens, Athens Chairman
Report of Committee on Rush Monument Fund, by W Murray Weidman, Reading, Chairman
Report from the State Board of Medical Examiners

Wm B Atkinson, Permanent Secretary

NECROLOGY

William S W Ruschenberger, M D, Medical Director on the retired list with relative rank of Commodore of the United States Navy died at his home in Philadelphia, March 24, 1895, in the eighty eighth year of his age He was born n Cumberland County, New Jersey, Sept 4, 1807 Entered the Navy as Surgeon's Mate in 1826 and the Medical Department of the University of Pennsylvania under the preceptorship of Prof Nathaniel Chapman and J P Hopkinson, and received his degree in 1830 He was appointed Surgeon to the East India Squadron and served in that capacity for two years, during which time he circumnavigated the globe He was made Superintendent of the United States Naval Hospital at Brooklyn He is credited with organizing the first medical bureau and laboratory for supplying the Service with unadulterated drugs He was Fleet Surgeon of the Pacific Squadron from 1847 to 1850, and of the Mediterranean Squadron from 1860 to 1861, serving between cruises at the Naval Hospital in Philadelphia During the Civil War Dr Ruschenberger was stationed at the Boston Navy Yard, where he rendered efficient service After the war he returned to Philadelphia From 1866 to the date of his retirement, Sept 4 1869, he was the senior officer in the Medical Corps, and March 3, 1871, he was commissioned Medical Director on the retired list, with the relative rank of Commodore Dr Ruschenberger has been a prominent figure in medical and scientific circles for many years He was President of the Academy of Natural Sciences from 1869 until 1885 when he was succeeded by Prof Joseph Leidy He continued to serve as one of the Curators until his death He became a Fellow of the College of Physicians in 1838, and subsequently served for several years as Secretary, and was elected President in 1879 succeeding Dr George B Wood, and in turn was succeeded by Dr Alfred Stillé in 1883 He was sent as a delegate to the American Medical Association in 1847, at a time when the College had a representation in the National organization He was also a member of the American Philosophical Society and of the Historical Society of Pennsylvania As chairman of the building committee of the Academy he rendered for five years most important service in carrying out the plan for the erection of the present hall and was one of the distinguished orators on the occasion of the laying of the cornerstone He wrote a history of the Academy in 1852, and the report of his scientific observations on his cruises were published in popular form, among which are "Three Years in the Pacific" A Voyage Around the World" Elements of Natural History" 'Notes and Commentaries during a Voyage to Brazil and China," "Lexicon of Terms Used in Natural History" He also wrote an obituary notice of Samuel George Norton, M D, and other contributors to the proceedings of the organizations of which he was a highly honored member He wrote a report on U S Marine-Hospitals which appears in the first volume of Transactions of this Association



Wm S W Ruschenberger M D

James Ridley Taylor, M D, of New York City, died March 24, aged 75 years He was a native of Scotland, but was brought to this country at an early age He was 54 years of age when he took his medical degree at Bellevue Hospital Medical College He had in his first half century given rein to his talent for invention, and this in the direction of mechanical pursuits He made a fortune in this line Then while his two sons were qualifying themselves for practice he himself took up the study of medicine, and straightway went to the front as a surgeon He was for six years a lecturer on clinical surgery at his alma mater He was a member of the County Society, the Physicians Mutual Aid Association, the Medical Union, the Academy of Medicine, and of the 'Old Guard" militia organization, which sent representatives at the time of interment at Woodlawn Cemetery

MISCELLANY

Asylums for the Inebriate Insane —Within a very few years the inebriate-insane class in France has increased from 11 to 16 per cent, according to *L'Union Medicale*, and until recently no provision has been made for them save in the regular insane asylums Owing to a campaign inaugurated by Dr Magnan of the St Anne Asylum and Drs Deschamps and Dubois, Municipal Counsellors of Paris, the Council of the Seine has decided to build an asylum for the inebriate insane It will cost $840,000, will accommodate 500 men and 200 women, and is expected to be finished in the course of the present year

Endoscopy of the Urethra—Grunfeld announces in the *Bulletin Medical* that endoscopic examination of the prostatic urethra reveals some peculiarities If the instrument be introduced up to this region and the patient be asked to contract the levator ani, as at the end of defecation, it will be noticed that the posterior urethra is drawn back from six to fifteen millimeters This facilitates examination of the verumont anum and the neighboring mucous membrane This means of examination may be compared to that used in laryngoscopy, where the patient is told to utter sounds, so as to allow inspection of the vocal cords

Roosevelt Hospital, New York—The Twenty-third Annual Report is a neatly illustrated pamphlet One of the cuts shows the new amphitheater with a surgical clinic about to take place The death rate for 1894 was about 120 per 1,000, or deducting the cases admitted moribund, less than 90 per 1,000 The total number of days of hospital treatment was 56,500, and average per diem cost per capita $1 97, but deducting out-patient work, the in-patient cost was $1 74 per diem, of which 26 cents was for food The number of hospital attendants was 124, average daily patient population 155, showing an apparent inflation of the paid service departments There were ambulance calls to the number of 1,642 The accident room treatment included 5,019 cases that did not need the regular hospital ward care, but received relief without taxing the accommodations of the hospital in the regular way This department of the work has so far increased that it is proposed to make an addition for that object and for a Nurses' Home, that should cost not less than $150,000, enlarged quarters for private patients will also enter into this plan

Diphtheritic Conjunctivitis Treated by Serotherapy—Dr Jessup recently communicated a report to the Royal Ophthalmological Society of two cases of diphtheritic conjunctivitis treated by Klein's antitoxin The first case was that of a boy, aged 19 months, with false membrane on the conjunctivæ of both eyelids of the left eye, with a patch on the uvula, swelling of the sub-parotid lymph glands and albuminuria Three injections were made, the total quantity of the antitoxin used was three grams The membrane disappeared in five days without leaving any trace on the conjunctivæ, though the only local application used was distilled water In the second patient, also a boy aged 8 months, there were membranes on the palpebral conjunctivæ of both eyes, enlarged glands and a muco-purulent discharge from the nostrils Two grams of the antitoxin were used in two injections and the false membrane disappeared in four days Hayward examined the membranes in both cases and discovered large quantities of the Löffler bacillus In his opinion the cure was certainly due to the antitoxin, because these cases are generally accompanied with purulent ophthalmia and ocular lesions which are very slow in healing Coppey, of Brussels, has also reported a case in a little girl of 1 year, with severe ocular diphtheria cured in four days after one injection of Behring's serum

The Philadelphia County Medical Society—We print herewith a circular which is being industriously circulated by the Philadelphia County Medical Society We make no comment on the kind of tactics which seeks to have other societies act on an *ex parte* statement, but we venture to remind our brethren in other societies that this matter is one which *must be settled by the* American Medical Association The Journal has taken no editorial part in this matter, but it can not help noticing that not the slightest commendation is given for any of the many changes that have taken place in the Journal within the year, nor is any hint or suggestion given, of how the Journal is to be supported if its advertising is cut off

There are two direct mis-statements in the committee's report which we are sure they will be pleased to have corrected, one is that the decision of the Judicial Council was "not given to them or published" We notice that Dr John B Roberts has signed this document, and that he was also the Secretary of the Judicial Council If he failed to notify his associates on the committee of the action of the Council, surely the Journal is not to blame In the matter of the Stock Sanatorium, that advertisement was inserted *once* by inadvertence of a clerk, and afterward suppressed In the matter of Labordine, it will be seen by reference to its advertisement, that the *formula is published* each insertion It is therefore not a *secret* preparation

The present management has acted according to its best judgment for the interest of the Association, and as the Trustees are personally liable for the expenses of the publication (the Association having so far refused to become incorporated) they would naturally be much pleased to have some of the critics point out a way to support the Journal They *assume* that the critics mentioned are friends of the Journal, but the evidence is not overwhelming that the persons behind the movement are not really inimical, and would not rather have it die than live They at least are remarkably careful not to commend the Journal in any way, nor have these persons ever commended it since its establishment, when the proposition of a certain Philadelphia publisher to publish the Journal was rejected

These warlike preparations seem to us altogether unnecessary If our dear friends really wish to see the Journal independent of any particular class of advertising matter, will they kindly point out the best means of supporting the Journal without receipts from advertising, and exactly how much they are willing to contribute to that support? The Trustees are ready to receive suggestions on this point, as they have not up to this time quite understood how to go on building up and enlarging the Journal while depriving it of the revenue accepted by other journals recognized as reputable throughout the world The Journal has in fact declined a great many of the advertisements offered, when the formula was refused

Seriously, the question arises, Will the profession support the Journal in such a step? Will they contribute more freely? These are points that any sound business committee would want to have settled before they accede to any very radical departure from existing methods that at present are universal in medical journalism

PHILADELPHIA COUNTY MEDICAL SOCIETY
James C Wilson, M D, President, T B Schneideman, M D, Secretary
N E Cor Thirteenth and Locust Streets Philadelphia, Pa

Dear Doctor—As a member of a constituent society represented in the American Medical Association, your attention is asked to a matter in which every such member has a measure of personal responsibility You will find the history and present status of the question at issue set forth in the annexed report of the delegates of the Philadelphia County Medical Society made on their return from the last meeting of the American Medical Association, held in San Francisco in 1894 In this *connection we would call your attention to the following salient points*

1 The Code of Ethics—the moral and organic law of the American Medical Association—as is well known not only prohibits physicians from employing secret nostrums, but declares that "in any way to promote the use" of such nostrums is reprehensible

2 The advertising of such nostrums in the Journal of the American Medical Association, which is taking place, is certainly an attempt to promote their use The Association appears, therefore, at least tacitly to permit the Editor and Trustees of its official journal to transgress, in the conduct of the Journal, the law laid down for our guidance as physicians

3 The attention of the Association having been called to the inconsistency of its course in this regard, resolutions were unanimously adopted at the Detroit (1892) meeting, instructing the Trustees of the Journal in future o respect this prohibition of the Code in the discharge of their trust

4 Thereupon the Trustees appear to have evaded this command by adopting as their governing policy the rule 'that an advertisement of a proprietary medicine shall be accepted in the discretion of the Committee when the proprietors thereof shall furnish the complete formula" The advertisement of secret nostrums in the Journal continuing the Trustees have presumably, become accessory to the secrecy inasmuch as complete formulæ of the preparations referred to are not published Plainly, persistence in the present course results in an abrogation by indirection of a fundamental provision of the Code, which should either be strictly enforced or frankly repealed

The contention of the Trustees that without the income derived from this particular class of advertisements a deficit would result does not in any way meet the ethical issue nor does the precedent of other journals including the organ of the British Medical Association, furnish a justification for the course adopted

The question under consideration is not one of money but of morals the American Medical Association can not afford to sell its honor *under any circumstances or for any price* But would not the apparent financial sacrifice entailed by an honest and hearty observance of the spirit and letter of the Code of Ethics in the conduct of its journal be compensated by an increase of subscriptions thereto brought about by higher respect and enthusiasm for it on the part of members of the constituent societies "

Do the members of your society—county or State—desire the continuance of the present policy? If not it is hoped that the subject will be discussed by you at an early meeting and formal action taken upon it

Hoping to be promptly advised of your action, we remain sincerely yours

(Signed) CHARLES H THOMAS M D,
JAMES TYSON M D,
RICHARD J PHILLIPS M D,
S SOLIS COHEN M D

Committee appointed by the Philadelphia County Medical Society to carry out the recommendation in the following report

March 11, 18

Report of the Delegates Representing the Philadelphia County Medical Society in the American Medical Association

The undersigned, delegates to the AMERICAN MEDICAL ASSOCIATION who attended its meeting held in San Francisco June 5 to 8, 1894 respectfully report

The general character attendance and work accomplished by the meeting have already been laid before the members in detail in the JOURNAL of the ASSOCIATION

The questions as to revision of the Constitution By laws, and Code of Ethics of the ASSOCIATION were decided adversely to any change but are likely to be re-opened by amendments introduced at that meeting and in this way to come before the approaching meeting of the ASSOCIATION

In the matter of the policy of the JOURNAL with reference to objectionable advertisements your delegates endeavored to carry out the expressed will of the Society and believe that all was accomplished in bringing the matter to the attention of the ASSOCIATION that it was possible for so small a delegation to accomplish

At the meeting of this Society May 23 1894 the following resolution was adopted

"*Resolved* That the Philadelphia County Medical Society instructs its delegates to San Francisco to coöperate with the delegation of the Pennsylvania State Medical Society in bringing before the Judicial Council the questions relating to the conduct of the ASSOCIATION JOURNAL and that Dr Edward Jackson be designated to represent this Society before the Judicial Council with power to obtain the assistance of other members of the AMERICAN MEDICAL ASSOCIATION "

The attention of the delegates of the Medical Society of the State of Pennsylvania being called thereto a committee to represent that Society, composed of Drs Edward Jackson John T Carpenter and Lewis H Taylor was appointed These delegates representing the county and State societies then prepared the following statement which was submitted to the Judicial Council

The undersigned appointed to represent the Medical Society of the State of Pennsylvania and the Philadelphia County Medical Society, respectfully submit to the Judicial Council of the AMERICAN MEDICAL ASSOCIATION

That the Code of Ethics of the AMERICAN MEDICAL ASSOCIATION in the chapter Of the Duties of Physicians to Each Other and to the Profession at Large, Article I Section 4 declares it is reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines or in any way to promote the use of them

That the use of such secret medicines has been promoted by their advertisement in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION and that the AMERICAN MEDICAL ASSOCIATION at its meeting in 1892 adopted the following resolution

Resolved That the attention of the Trustees of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION be directed to the fact that the Code of Ethics prohibits all commendatory mention or advertisement of secret preparations and that said Trustees are hereby instructed to respect said prohibition in the future conduct of the official journal of this ASSOCIATION

"At the meeting of the ASSOCIATION in 1893 the Trustees of the JOURNAL reported that they had instructed the editor that when the editor is in doubt about the character of an advertisement he shall refer the same to the Committee on Advertising and that an advertisement of a proprietary medicine shall be accepted in the discretion of the committee when the proprietors thereof shall furnish the complete formula.

This action led members of the ASSOCIATION to hope that such advertisements would be stopped Nevertheless the advertisements of such secret medicines continue to be published See advertisements in the issue of May 5 1894 of Labordine, page ii Antikamnia, page iii Perpœna page xxii and others

'Either the rule reported by the Trustees has not been enforced or it was framed and intended to permit the continued violation of the Code of Ethics and expressed will of the ASSOCIATION

If the proprietors of secret medicines have furnished complete formulas of the same, these formulas have not been published The medicines remain secret and the Trustees of the JOURNAL have become not merely promotors of their use but partners in the secrecy

"Furthermore, that in the JOURNAL for April 7 1894 advertising page vii, appears an advertisement of the American Physicians Sanitarium Association, offering to '*treat and cure* all forms of narcotic and alcoholic inebriety' and promising '*250 shares ($100 each) reserved to issue free to physicians sending the first 250 patients* (one share for each patient sent) All stock received at par in payment for treatment charges

"It is submitted that such use of the JOURNAL of the ASSOCIATION in opposition to the purposes and organic laws of the ASSOCIATION constitutes a breach of trust on the part of the Trustees of the JOURNAL, and should be so declared by the proper tribunal, viz your honorable body

(Signed) EDWARD JACKSON, M D,
JOHN T CARPENTER M D,
LEWIS H TAYLOR, M D

For the Philadelphia County Medical Society and the Medical Society of the State of Pennsylvania

With this were submitted marked copies of the JOURNAL of the ASSOCIATION containing the advertisements specifically complained of The Trustees of the JOURNAL were heard in their own defense your committee being at the same time present and permitted to speak before the Council

The Judicial Council however failed to secure a quorum and take action on the matter until after the adjournment of the ASSOCIATION, and although there is reason to believe that the decision arrived at has been communicated to the Trustees of the JOURNAL, it has not been given to your representatives nor so far as we know has it been published to the ASSOCIATION

The annual report of the Trustees of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, in addition to the statement of the work of the Trustees for the past year, contained the following defense of the policy they have pursued with reference to advertisements, which is substantially similar to that made by the Trustees before the Judicial Council

"During the entire existence of the JOURNAL no question has presented greater difficulty or afforded your Board more embarrassment than to discriminate as to what may be considered as proper matter for its advertising pages The policy adopted was, that having entered upon the business of publishing a journal we would be governed by the same rules followed by those considered reputable who were engaged in the same business The *British Medical Journal*, representing an Association with similar purposes and aims, was particularly indicated as a standard

"Beyond insertion of the advertisements, the JOURNAL has scrupulously avoided any expression which could be interpreted as an indorsement of the advertisers believing the owners of the JOURNAL—the profession—were capable of discriminating as to what would serve their interests

"After the meeting of the ASSOCIATION in 1893 the Trustees resolved that an advertisement of a proprietary medicine shall be accepted in the discretion of the committee when the proprietors thereof shall furnish the complete formula

This course has since been our governing policy The Board asserts that it has complied with the letter of the law in demanding that a formula of all secret and proprietary remedies should be submitted to its committee before being advertised in the JOURNAL but it would direct your attention to the fact that had the apparent intention of those who censure our action been established we would be obliged to present to you to day a considerable financial deficit However desirous the Board might be to comply with the wishes of some members of the ASSOCIATION, it could not forget that under the present Constitution of the organization the members of the Board were the only parties legally responsible for obligations incurred and they had too much confidence in the sense and justice of this body to believe it would demand they should make bricks without straw,' and discard a source of support utilized by other reputable journals

No advertisements have been inserted in the JOURNAL which do not find place in such publications as the *British Medical Journal*, *Boston Medical and Surgical Journal* *New York Medical Record*, *New York Medical Journal* and *The Medical News*

When this report had been submitted to the ASSOCIATION on the second day of its meeting to the motion to approve it, Dr Jackson moved an amendment That the report be received, that thanks be tendered the Trustees for their efforts in behalf of the JOURNAL that the other suggestions be adopted but that the ASSOCIATION does not approve the policy of the Trustees with regard to advertisements

This amendment was laid on the table by a vote of 86 ayes to 53 nays On a later date of the meeting Dr Jackson introduced the following

WHEREAS The interests of the JOURNAL of the ASSOCIATION require that it should command the confidence of the members of the societies in affiliation with this ASSOCIATION and

WHEREAS, The JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION has continued to publish unethical advertisements like those of Antikamnia' Labordine, and other secret nostrums, and that of the American Physicians Sanitarium Company, offering one hundred dollars worth of stock to physicians sending it patients and,

"WHEREAS The Trustees of the JOURNAL have defended such a course on the ground that the money from such advertisements was needed to publish such a journal as they thought creditable to the ASSOCIATION

Resolved That the various State medical societies in affiliation with this ASSOCIATION are hereby requested to inform this ASSOCIATION whether their members approve the policy of admitting such advertisements to the pages of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

A motion to lay this upon the table was lost by a vote of 102 ayes to 113 nays and after discussion, the resolution was referred to the Judicial Council What the decision of the Judicial Council has been upon the case presented or what action it will take with reference to the above resolution referred to it we do not know The action of the ASSOCIATION, however in adopting the report of the Trustees is an approval of the course the Trustees have pursued and a fair assumption of responsibility for the same Criticism of the Trustees as trustees for this course should, therefore be regarded as ended

Whether the AMERICAN MEDICAL ASSOCIATION however, can when its attention has been fully drawn to the inconsistency between its Code of Ethics and its practice continue in such a course is an entirely different matter From the expressions of opinion by individual members present at the meeting from the difference between the vote of approval of the report of the Trustees and with reference to laying on the table the resolution later offered, it seems to us that the members of the ASSOCIATION are beginning to appreciate the illogical and false position in which the ASSOCIATION places itself by depending for the support of its JOURNAL on the advertisement of a class of preparations that it denounces in its Code of Ethics and we believe the appreciation of this aspect of the case must extend and increase

Your delegates at San Francisco were met with the statement that only in the State of Pennsylvania had the policy of the JOURNAL with reference to advertisements been adversely criticised [1] If the question is to be considered and discussed, it should be free from any personal or sectional bias It is important that affiliated medical societies in other parts of the country should be induced to consider the subject and take action upon it.

We would therefore suggest if the Philadelphia County Medical Society has that real interest in the subject which justifies the placing upon its delegates of the ungracious office they had to perform at San Francisco, it prepare a brief statement of the objections to allowing the advertisement of nostrums in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and send this statement, with a request to consider the subject and take action thereon, to the various State and county medical societies throughout the country

We believe that if the constituent societies clearly express their disapproval of the policy in question, the AMERICAN MEDICAL ASSOCIATION and its Trustees will frankly accept the decision so reached, and that the object which this society seeks will be accomplished—the improvement and elevation of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIA

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[1] Resolutions disapproving the publication of nostrum advertisements in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION have been passed by at least two other State societies, namely, those of Missouri and of Texas The American Pharmaceutical Association passed a resolution approving the action taken by the AMERICAN MEDI

TION to a position where not only in its scientific and literary, but also in its ethical excellence, it shall lead rather than follow other medical journals, and so shall command the full respect and support of the whole profession

(Signed) Edward Jackson, M D ,
J H W Chestnut M D ,
John B Roberts M D ,
G Benson Dunmire, M D

Washington Notes.

Medical Society of the District —At the meeting of the society held on the 20th inst , Dr Acker read a paper on "Intubation for Pharyngeal Diphtheria," and Dr Stone read one on "Practical Massage " At the meeting held on the 27th, Dr J T Kelley read an essay on "Hysteria," and Dr C W Stiles read an article entitled, "The Rarity of Tænia Solium in America "

Hospital for the Insane —The annual report of the St Elizabeth Hospital for 1894 contains an instructive report on "Ten Cases of Intracranial Tumors," by the pathologist, Dr J W Blackburn

The Sibley Hospital —This hospital was formally opened to the public on the 25th inst , and is now in "thorough working order "

The Home for Incurables —The most successful hospital benefit of the season took place on the 27th inst , when Mrs Hearst extended the use of her home for the entertainment in benefit of the Home for Incurables

Water Service Extension —The Commissioners have directed the extension of the water service in the northern portion of the city, and will expend $40,000 in the enterprise This will fill a long-felt want and have a very favorable influence on the general health in that locality

Health of the District —The report of the Health Officer for the week ended March 23 is as follows Number of deaths (still-births not included), white 64, colored 50, total 114 Death rate per 1,000 per annum, white 18 13, colored 29 42, total, 21 91 Death rate per 1 000 per annum for corresponding week last year, 20 98 Still-births White 6 , colored 11 , total 17 During last week no death occurred in the District from any contagious or zymotic disease As compared with the previous week, there was a slight increase in the death rate The principal causes of the mortality were heart troubles and lung complications From the latter nearly one-third of all deaths resulted There was an absence of malarial and diarrheal influences to a noticeable degree, there having been but two fatal cases of each Infant mortality stood at the normal No new cases of smallpox were reported, thus leaving but four cases under treatment under the direction of the Health Department, and these are convalescing Dr Elliot, the physician in charge of the smallpox hospital, has been sick with varioloid at the smallpox hospital

The Providence Hospital —The good Sisters in charge of the Providence Hospital can always be relied upon to help the poor sick outcasts whom no other institution wishes to provide for A poor woman with a child suffering from diphtheria went the rounds of the hospitals a short time ago seeking admission, but failed until she was sent to a room in the workhouse hospital The Commissioners, in the absence of a contagious disease hospital, are at last to provide for such cases As all of the hospitals of the city have rules against the admission of such, the Commissioners appealed to the different institutions and urged the providing of wards for such cases The Providence Hospital answered promptly and at once made the necessary arrangements to care for poor patients suffering with such diseases The community will not soon forget this and many other humane acts of these good helpers of the sick

St Louis Notes

St Louis Medical Society —At the regular meeting on March 30, the scientific program consisted of the presentation of pathologic specimens Compared with the number present at the preceding meeting, the attendance was small, but the minutes of the previous meeting were not without their effect upon those present, calling up a lively personal discussion on the resolution to exclude newspaper reporters This resolution led to the adoption of one to provide for the appointment and pay of a sergeant-at-arms to exclude unqualified persons from the meetings of the society Notwithstanding the resolution of exclusion, the Sunday morning papers contained full accounts of the proceedings of the society

The Tri-State Medical Society meets at the Planters' Hotel April 2, 3 and 4, under the Presidency of Dr James Moores Ball

The scientific papers will be read at the Planters', and clinics will be given at the City Hospital by Drs W W Keen and Chas A Oliver, of Philadelphia Dr John A Wyeth will deliver the address on surgery , Dr F B Robinson the address on gynecology Among well-known members of the profession who have promised papers are Heneage Gibbs, of Ann Arbor , H N Moyer, Chicago , David Cerna, Galveston , Joseph Eastman, Indianapolis , Howard A Kelly, Baltimore , J M Mathews, Louisville , H O Walker, Detroit , Roswell Park, Buffalo , E P Davis, Philadelphia , Richard Dewey, Chicago , Chas L Dana, New York On the evening of April 3 a grand banquet will be given the visitors at the Planters' by the local profession, where the toasts will be directed by the genial toast-master of the society, Dr I N Love

Disease and Mortuary Record for the week ending March 30 Deaths 206 , 35 were due to zymotic diseases, 30 to constitutional, 99 to local, 30 to developmental, 12 to violence, 9 to smallpox, 1 to measles, 7 to diphtheria, 5 to membranous croup, 1 to pertussis, 2 to typhoid fever, 10 to consumption, 12 to bronchitis, 20 to pneumonia, and 4 to la grippe Of the dead, 38 were under the age of 1 year, 55 under 5, 39 over 60 , 42 were in public institutions Twenty one inquests were held The reports of new cases and deaths—smallpox, 27 new cases, 9 deaths , diphtheria, 31 cases and 7 deaths , scarlatina, 20 cases , typhoid fever, 1 case and 2 deaths , measles, 101 cases and 1 death , cerebro-spinal fever 1 case , pertussis 1 case and 1 death At quarantine, 1 case of smallpox died on the 30th, leaving 115 cases there

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from March 23, 1895 to March 29 1895

First Lieut Henry R Stiles, Asst Surgeon extension of leave of absence granted on surgeon's certificate of disability is still further extended two months, on surgeon's certificate of disability

Capt Jefferson D Poindexter, Asst Surgeon, is granted leave of absence for one month

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending March 30 1895

Surgeon L B Baldwin, detached from Pensacola Navy Yard, and ordered to the U S S Montgomery "

Asst Surgeon J S Hope ordered to the U S S "Montgomery "

Surgeon Howard Wells, detached from the U S S 'Montgomery," and granted three months leave

Marine-Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the fifteen days ended March 30, 1895

P A Surgeon G T Vaughan to proceed to Philadelphia, Pa , and assume command of Service, March 28, 1895

Asst Surgeon C H Gardner, granted leave of absence for fifteen days, March 22, 1895

Asst Surgeon H S Cumming, to rejoin station (New York, N Y), March 16 1895

PROMOTION

Eager, J M , commissioned as Passed Assistant Surgeon, March 26, 1895

LETTERS RECEIVED

Ash, H St Clair Philadelphia Pa Atkinson W B , Philadelphia Pa

Bowker, E M Boston, Mass , Baxter, W E , Bangor Me Bell, Guido, Indianapolis, Ind Birney, E Greene Iowa Brown, Edw J , Minneapolis, Minn , Brooks, H A , Salem, Mass , Brown, C B , San Francisco, Cal

Cantrell, G M D , Little Rock, Ark Case, C S , Chicago, Ill , Currier, J H , Mankato, Minn

Davison D A , Wymore, Neb , De Land, Fred, Chicago, Ill , Day, L T Westport, Conn

Ford, Chas , New York, N Y , Field Mrs , New York N Y

Givens, J W Blackfoot, Idaho Galloway, D H , Chicago Ill

Hutchinson Mahlon, Washington D C Hollingsworth & Mather, St Louis, Mo Hummel, A L, Philadelphia, Pa Hotz, F C , Chicago Ill Hays, F W Indianapolis, Ind Hummel, H L , Philadelphia, Pa

Johnston, W W Adv Agency, Chicago Ill

Koon T M Casenovia, Mich Kinneman, A S , Cleveland, Ohio, Krotoszyner, M San Francisco Cal

Moore M T Richmond Mich Mather Mfg Co , New York, N Y , Meisenbach A H St Louis Mo , Maclean, Donald, Detroit, Mich , Morgan, J D , Washington, D C

Parsons, C Hartford S Dak Potts, J S San Jose, Cal Parke, Davis & Co Detroit Mich Peacock Chemical Co , St Louis, Mo

Ray, J U Jr , Blocton Ala Rohé Geo H , Baltimore, Md

Seiler Geo Alma Wis Sullivan J E New York N Y Smith E,, Burchard Neb Stearns, F & Co , Detroit, Mich , Sayre, R H , New York N Y

Thorp, D D , Lansing Mich , Tuley H E , Louisville, Ky , Tobias, A W Coatsville, Ind Toner J M Washington, D C

Vetter J C & Co New York, N Y

West, H A , Galveston, Texas , Wyman, Hal C , Detroit, Mich

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LECTURES

LECTURES ON INTRACRANIAL SURGERY

IV—ABSCESS OF THE BRAIN

BY EMORY LANPHEAR, M D, Ph D
ST LOUIS MO

Suppuration in the brain does not differ from abscess in other parts of the body, except in the symptoms which arise from the peculiar location of the pus Formerly, abscess of the brain and cerebral softening were regarded as synonymous terms, but now we know that softening is the result of the death of brain tissue from interference with the blood supply—a purely passive process, the creamy mass possessing none of the characteristics of pus excepting the resemblance in consistency and color, on the other hand, abscess is the result of an active process, *inflammation*, and *in the broken down* tissues are found the distinctive microorganisms of true pus, and the same rule for the treatment holds good as in abscess elsewhere, let the pus out as soon as its location can be determined

MORTALITY

Abscess of the brain, from a surgical standpoint, is more favorable than almost any other form of cerebral disease The rule is therefore to operate always, and as *early as possible* *Death* is certain without surgical interference—relief is *sure if operation* be not too long delayed The mortality after operation is very slight—about 17 per cent according to von Bergmann—as compared with a death rate of 100 per cent *without it*

ORIGIN OF ABSCESS

Cerebral abscess is never idiopathic It always come from infection, the sources of which are three in number

1 *Trauma* —It may originate from blows or falls upon the head, even when the skin has not been injured nor the bone fractured, though often a punctured or other fracture has been present, in which cases it is usually associated with meningitis Following trauma the suppuration may be either diffuse (acute meningitis and cerebritis running on to pus formation and proving fatal within a few days) or circumscribed, the area of red, or inflammatory, softening growing more and more liquid in its center until it becomes simply a collection of pus In this instance the pyogenic cocci may reach the injured tissue by direct infection through a wound on the one hand or through the circulation on the other

2 *Embolism* —The abscess may be due to impaction of pyogenic emboli from some distant focus of suppuration (as the lungs, especially gangrene, bronchiectasis and fetid bronchitis, ulcerative endocarditis, empyema, etc), in which case it will probably be located near some terminal twig of the middle cerebral artery, especially the left

3 *Infection by Direct Continuity of Structures* —But most frequently intracranial suppuration is traceable to purulent inflammation near by, as from injury or disease of the bone *Of the latter we* see a typical *case in abscess accompanying inflammation* of the mastoid cells and in otitis media suppurativa, here the pus microbes find an entrance from the neighboring focus—and the same is true in abscess of the anterior lobes where caries of the ethmoid is the primary trouble

The method of extension is thus described by Moullin (2d edition, p 666)

"In many instances the inflammation spreads by direct continuity of structures, the bone first becoming inflamed and necrosed, the dura over it sloughs, and either the pus spreads into or through the arachnoid space at once, or the membranes become glued to each other and to the cortex by a protective inflammatory exudation before this can occur There are, however, other routes almost as direct along which the infection may travel It may spread down the internal auditory meatus, or through the hiatus Fallopii, or the aqueductus vestibuli, or it may extend along some of the numerous small veins (each surrounded by a peri vascular lymph-sheath) which run between the middle and internal ear on the one hand and the dura and pia on the other Some of these pass directly from the temporo sphenoidal lobe *to the dura co*vering the petrous portion of the temporal bone, others run through the squamo petrosal suture and through the slit in the dura that lies by the side of the aqueductus vestibuli, others again lie in the small canals which connect the middle ear directly with the middle fossa of the skull, and not a few communicate with the middle meningeal veins and the superior petrosal and lateral sinuses "

The only unexplainable phenomenon connected with the formation of cerebral abscess has been brought to notice by Senn, viz, how the staphylococcus pyogenes aureus (or albus) which elsewhere causes only circumscribed suppuration, and which is the peculiar pus organism of otitis media and of suppurative osteomyelitis of the ethmoid or other bones, may in some cases be the exciting factor of a diffuse, septic leptomeningitis such as would result from infection with the streptococcus pyogenes or the streptococcus of Fehleisen — the suppurative meningitis following erysipelas

LOCATION

But whatever the cause, since intracranial suppuration is invariably fatal if left *to itself*, the indications are always 1, to locate the affected point and 2, to open the skull, evacuate the pus, irrigate the abscess-cavity and establish free drainage So essential to success is this rule that when the dura is opened over the supposed seat of the abscess and no pus is found, it is advisable to thrust an aspirating needle into the brain in various directions until the pus is located, that is, in cases of supposed abscess following injury or infection from a distant focus I have often used a large needle in this way (even withdrawing some of the fluid from the ventricles) without apparent harm to the brain

Great care must, however, be taken not to practice this extensive exploratory work in those doubtful cases which, instead of being cerebral abscess are thrombosis of the lateral sinus or pyemia from middle ear disease—cases which closely simulate abscess of the brain in their clinical picture When the diagnosis is not certain the mastoid antrum must be first explored and free communication established with the external auditory meatus, by this procedure many cases of meningitis might be averted But—in cases presumed to depend upon suppurative otitis media—if no pus is found in this preliminary operation, exploratory trephining should be practiced, the points of selection being a little above and somewhat behind the meatus (to expose the anterior surface of the petrous bone) or just behind the meatus and on the same level

It is best, perhaps, to first examine the orifice of the mastoid vein, and if no evidence of thrombosis be found, to then make the opening in front, exposing the under surface of the temporo-sphenoidal lobe The reason for this advice is that 95 per cent of cerebral abscesses occur within a circle of an inch radius, the center of which is a point one and one-half inches above and one and one-fourth inches behind the center of the meatus auditorius externus Rarely abscess is found in the anterior lobes or the cerebellum

The pus may be, as regards the skull

1 Subcranial—between the bones and dura,
2 Subdural—among the meninges,
3 Subcortical—in the substance of the brain

SYMPTOMS

The symptoms of cerebral abscess vary according to the rapidity of development and location of the point of suppuration Very rarely the trouble is ushered in by a rigor and high fever, succeeded by delirium, vomiting, headache and other symptoms of acute meningo-encephalitis, this is what is called acute abscess, and follows injury or operation Usually the symptoms are quite slow in making their appearance, as certain parts of the brain (like the apex of the temporal lobe, a favorite site of abscess) may for long contain an abscess of considerable size with no special symptoms to direct attention to its existence, the disease being suspected only when it begins to encroach upon more important structures either by pressure or direct irritation When thus far advanced there will be found a subnormal temperature for a part of the day in most cases, together with more or less headache, and irregular fever

In cases dependent upon traumatism there is commonly a latent period after the injury This may, in rare instances, be as short as two weeks, but is generally much longer, even years occasionally elapsing before the disease causes trouble In this period the patient is likely to become cachectic, more or less loss of memory accompanying the decline in bodily health, though the head symptoms may be so slight or so gradual in their development as to escape notice Head pain is almost always present and may be quite intense, but I have operated upon one

of the hemisphere) where no pain whatever was ever felt, the location of the pain does not necessarily correspond to the situation of the abscess The headache may be either general or local Optic neuritis is a quite frequent accompaniment and the pupil upon the affected side may be dilated or fixed

Only too often localizing symptoms are not present, and so when headache, drowsiness or partial paralysis make their appearance some time after an injury or during the progress of long-continued middle ear disease, the surgeon is compelled to resort to exploratory measures, operating in the one instance at the point of trauma (though abscess may really be far distant) and in the other at the point of selection already described As a rule, it may be said that the chief evidences of abscess are subnormal temperature, irregularity of the pupils, and a dull, sluggish condition of the mental faculties, possibly diversified by unexplainable fits of irritability, with more or less headache, either localized or diffuse

Ptosis, fixed mydriasis or paralysis of the ocular muscles indicate the temporo-sphenoidal lobe as the location of the abscess, and it is not at all unusual for more or less paralysis of the arm and face to be present from compression of the lower motor centers which are close by, with aphasia if in the left hemisphere Hemianopia and occipital headache are the chief signs of abscess in the hind-brain

When the abscess is located in the cerebellum, vomiting is added to the other symptoms, and when the middle lobe is affected, staggering (cerebellar incoordination) is also present usually Abscess o the cerebellum is so uniformly due to middle ear disease that when suspicion of abscess exists in the history of a case of otitis media and trephining doe not reveal the pus in the temporo sphenoidal lobe the surgeon should open the skull over the cerebellum and explore for abscess in this region

DIAGNOSIS

These symptoms occurring weeks, months or year after severe injury to the head, or following a chron discharge from the ear, are sufficiently prominent t enable the surgeon to make a diagnosis, or at leas to give him enough assurance of the probable existence of pus within the cranium to justify exploratory trephining Nor is a localizing symptom necessary to determine the situation of the abscess i the majority of cases, the operator may here wel rely upon his knowledge of the pathology of the disease and the surgical anatomy of the part involved In every suspicious case the patient should be give the benefit of the doubt, and here, if anywhere, th surgeon is to be commended for being positive i his demand for operation and prompt in carryin conviction into effect

Certain kinds of tumor resemble abscess in the clinical picture, but choked disc will be found present almost invariably in tumor, while it is not a frequent symptom in abscess Besides, in tumor th absence of a cause of abscess may be regarded a highly important from a diagnostic standpoin And last—subnormal temperature alternating wit an irregular febrile record will not be found i tumor, but may be absent in abscess as well

Pus in the mastoid antrum may give rise to all th symptoms of abscess (even optic neuritis) but the disease In case of doubt one should open the mastoid before trephining

Thrombosis of the lateral sinus is quite similar in a general way but a chill precedes the other symptoms, the pain is located at the point affected, and a stiff neck, retracted head and tenderness or edema over the mastoid will assist in differentiating Later, pyemia occurs If doubtful between thrombosis and abscess the mastoid vein may be exposed before trephining, if active the sinus is not clogged

The transition from a chronic to an acute abscess may be sudden from a blow upon the ear or head (as in the case of Mr D, of which I will soon speak) or from exposure to cold and wet, and should not interfere with a proper diagnosis being made

Cerebellar abscess is almost beyond the possibility of positive diagnosis, the symptoms being very indefinite Severe occipital headache, persistent vomiting and retraction of the neck, with irregular variations in the temperature are suggestive of disease of the cerebellar hemisphere, and when arising in connection with ear disease are enough to warrant exploration

OPERATION

It is frequently necessary, as will be evident from the preceding remarks, to make exploratory trephining, which here is certainly justifiable If the abscess is not found at the seat of injury in traumatic cases, if the brain project into the opening and is pulseless, there can be little doubt as to the existence of an abscess somewhere and, an aspirating needle must be inserted in various directions until the pus is found, in so using the needle the point must never be moved from one part of the brain to another without withdrawal, as important fibers would be injured, but by taking the needle clear out of the brain tissue and re inserting it with the point guided in the desired direction little permanent injury can be caused

In cases of middle ear disease the scalp is retracted as a large flap including the pericranium, and the trephine applied at the point already indicated, viz, one and one half inches above and one and one fourth inches behind the center of the external auditory meatus, if nothing is found on reaching the dura, the latter is opened and exploration made

Moullin very properly says if no abscess is found in this anterior operation, either between the dura mater and the bone or in the substance of the brain, and there is no evidence of thrombosis of the lateral sinus even when the orifice of the mastoid bone is exposed the surgeon should not hesitate to extend his exploration, even at the risk of being called hazardous, but should separate the periosteum and muscular attachments from the occipital bone beneath the superior curved line and open the skull so as to explore the lateral lobe of the cerebellum In many cases of cerebellar abscess, however, there is sinus thrombosis as well, and there must consequently be some danger of the one being overlooked when the other is found—so it is best to search for both in every suspicious case If extra dural abscess or thrombosis of the lateral sinus be found, the jugular vein must be at once tied to prevent *débris* getting into the circulation, as the only hope of saving life lies in thoroughly cleaning out the clot and removing the whole focus of the disease (Operation for thrombosis of the lateral sinus will be considered more in detail in a subsequent lecture)

When the abscess cavity has been located, a free incision must be made into it to obtain thorough drainage Then, for the only time in cerebral surgery, an antiseptic solution may be employed, in every other operation a normal salt solution being used for irrigation, etc, after the point of exposing the dura has been passed In abscess, however, the cavity should be thoroughly washed out with hydrogen dioxid followed by a solution of bichlorid of mercury, 1 to 2,000 A large rubber drainage tube is then introduced and the wound in the scalp closed with silkworm gut sutures except at the point of drainage It is perhaps well to dust in a considerable quantity of iodoform or other drying antiseptic powder, before closing the scalp Very great care is exercised in dressing, fresh sublimate gauze being applied in abundance, as further infection from without must be avoided

The drainage tube is washed out twice daily for a time, especially if it becomes clogged, later, once daily is sufficiently often to dress the wound Day by day as the wound fills with granulation tissue the tube must be drawn farther and farther out, care being taken not to let the external wound heal too speedily Usually from two to three weeks will be required for the abscess to stop discharging

During the operation the most scrupulous care is to be taken as to asepsis The scalp must have been thoroughly scrubbed and cleaned with alcohol or sulphuric ether and sublimate solution, and the hands of the operator and assistants disinfected by scrubbing for six to ten minutes and immersion in saturated solution of permanganate of potassium, then in strong solution of oxalic acid and finally in sublimate solution for two minutes, or in the absence of these, soaked thoroughly in alcohol and then in sublimate solution And during the operation, if any object be touched which has not been sterilized —the table, the pulse of the patient, a chair, the pillow, etc —the hands must be washed again in the sublimate solution before touching the wound or any instrument These are little points, you say? No, indeed! Too many surgeons, nowadays, are too careless in these little details, and a human life may depend upon the care with which seemingly trivial acts are watched by the operator, no assistant must be for a moment beyond the eye of the surgeon, or if necessarily so be compelled to wash again There may be no pus in the brain, and carelessness will cause infection It is especially in redressing the wound that I would urge the greatest care Here the surgeon says to himself "Oh well—I have already a purulent infection, the wound is a pus-producing one, so I need not be careful" Only too often have I heard such remarks from men who should know better There are other germs besides the staphylococcus pyogenes aureus which is found in these abscesses, and the greatest care in aseptic details must be carried out in the dressing, or there will be contamination through carelessness and death will result when recovery should have occurred

CASES

As I have already stated, abscesses are occasionally not single Kidd reports a case of double abscess in which the trephine was used in the frontal region and pus evacuated from an abscess, the patient died on the fourth day and the post-mortem examination revealed a second and larger abscess in the temporo-sphenoidal lobe of the right side *without* (a rarity, indeed) disease of the petrous bone, the cause of the frontal focus was a recent kick of a horse—that of the posterior abscess unknown A case quite similar gave one of the two fatal results I have had in my own operations for abscess

Chas D , aged 32 years, was struck upon the right side of the head by a rapidly moving car in Kansas City, on the night of Sept 18, 1891 He was unconscious for a little time, but recovered and went about his work next morning, though his employer noticed that he acted strangely—"dazed" This condition continued until Oct 11, 1891, when he went to bed on account of an increasing head pain, especially marked at the junction of the parietal and occipital bones of the right side—the place of injury He developed fever, had a severe general convulsion, repeated chills at irregular intervals and finally became delirious and semicomatose I first saw him October 18 in consultation with his physicians, Drs C D McDonald and G E Mosher I advised trephining at the point of injury and also over the temporo sphenoidal lobe of the opposite side on account of a chronic ear discharge, though there were no localizing symptoms pointing to trouble there—it was merely advice founded upon general principles At 4 P M when arrangements were completed the patient was in profound collapse, the pulse intermittent and weak, extremities cold, eyes turned strongly to the left and insensible to light, operation was therefore postponed, as it was seen that death on the table would be the effect of our work

Under stimulants, etc , he improved somewhat, and on October 25, I opened the skull at the spot injured The dura bulged prominently into the hole and was entirely without pulsation On turning back the dura a large area of softened brain tissue presented, which upon incision gave a considerable amount of pus This cavity was scooped out and the surrounding red softening gently curetted with a sharp spoon, a Paquelin cautery being necessary to control the sharp hemorrhage Palpation showed quite extensive softening anteriorly, but not broken down tissue, so it was left After irrigation a drainage tube was inserted and the scalp closed As the man was in extreme collapse from the bleeding, no further exploration was deemed advisable There seemed to be quite an improvement that day in his mental and general condition though shock was profound On the 27th we dressed the wound, finding fully an ounce and a half of pus discharged Fresh dressings were applied and the patient made easy, but he died the next morning apparently from exhaustion

The autopsy showed another abscess, evidently of months standing in the left temporo-sphenoidal lobe due to caries of the petrous bone The only ante-mortem evidence of this abscess was the chronic discharge from the middle ear with an occasional sharp pain in the occipital region of the left side

As illustrating the fact that the abscess may be located far away from the site of injury, I quote my other fatal case from my record book

Ed F , carpenter, age 26, was shot by pistol, the ball entering one and a half inches to the right of the saggital suture and two and a half inches posterior to the coronal It emerged (or the major portion of it as afterward proved) at the saggital suture, cutting the superior longitudinal sinus The hemorrhage was consequently profuse and would have proved fatal had not a bystander crowded a handkerchief into the wound and applied firm pressure Fifteen minutes after the accident, I found him upon the floor in an incredibly large pool of blood, pallid, limp and helpless but conscious and talkative This was at 1 A M I packed the wounds with gauze and had him removed to the City Hospital At 9 A M I opened the wound and found the bone badly shattered between the two openings which were therefore made one by the bone forceps, a portion of the bullet was found lodged between the plates of the parietal bone All the broken-down brain tissue, amounting to a large teacupful, was trimmed away and after irrigation with water at 120 degrees, the cavity was packed with borated gauze The patient soon regained consciousness On the second day evidences of inflammation arose and a hemiplegia gradually developed—*but upon the same side as the wound*, a symptom we explained by saying it was a case in which there was no decussation of the motor fibers in the posterior pyramids After a few days the inflammatory signs disappeared, the wound healed nicely and the thirteenth day the man was sent to his home He did well for a number of weeks, but the paralysis did not disappear, I thought because the motor area was destroyed But he suddenly developed symptoms of abscess and died The autopsy showed the cerebrum of the injured side in excellent condition, so far as any lesion here was concerned he was well But a small fragment of the bullet pierced the falx cerebri a little above the corpus callosum and lodged in the white matter of the side opposite the injury, causing a hemorrhage just external to the corpus striatum—hence the hemiplegia of the same side as the primary injury This clot became the seat of an abscess which finally ruptured into the lateral ventricle, broke down the septum lucidum and caused death

In this case the subject practically recovered from the original wound and from the operation, and the man would have been restored to his previous condition of health had not the fragment of ball caused the abscess in the opposite hemisphere The location of the abscess I had no means of determining before death

It has been said that abscess of the frontal region can not be diagnosticated While this is true, there are certain cases in which we *suspect* abscess in the frontal convolutions and here exploratory operation can be made with some degree of propriety Three patients have been under my care for frontal abscess One case (subcortical) in which aphasia became a symptom as the disease progressed, would not consent to operation and died in the hospital, the autopsy showed the correctness of the surmise as to the location of the suppuration The other two submitted to operation and recovered The first I wish to report presented this history

Dora V , of Denver, Colo , aged 28 years, prostitute, was admitted to the hospital Sept 21, 1893 She complained of an intense severe headache, located just to the right of the middle line, two and one half inches above the orbit, this pain began about six weeks before, and continually grew worse Her physician regarding the case as one of gummy tumor, sent her to me for its removal, with the statement that for about ten days the mind had been seriously affected Upon examination she appeared stupid, dull, with dilatation of the right pupil, and there was some tenderness at the point of greatest pain Her temperature varied from 97 to 100 degrees during the next four days, so a diagnosis of abscess was made On September 26, assisted by Drs Thrush and Maxson I reflected the scalp at the point supposed to be affected, and made an opening about one inch in diameter with the gouge Upon removing the outer table there appeared evidences of bone inflammation, and when the inner table was pierced pus came welling up from within the cranium The abscess was subdural, but adhesions everywhere had prevented general meningeal suppuration, the cavity was therefore irrigated but not curetted Free drainage was established and the usual dressings applied September 27 the record says "Doing nicely, no pain, slept well, mind clearer Temperature all day, 99 5 degrees" She continued to improve rapidly, the discharge of pus ceased on October 28, and two days later she was allowed to go The cause is unknown, but is presumed to be syphilis probably aggravated by a blow, though no history of the latter could be obtained All her mental symptoms vanished immediately after operation, and at last account she was still well

The second case was subcranial The condensed history is as follows

Mrs B D , patient of Dr J E Dennis, 28 years old, I saw Dec 16, 1891, on account of severe headache of several weeks duration, which resisted every anti-neuralgic remedy, the doctor desiring operation for the relief of pressure on the brain, the symptoms certainly indicating such a condition A careful examination failed to show any disease of the ear or the nose, the retina was slightly congested, pupils very sluggish, slight ptosis of right lid No cause for the pain could be discovered unless it was due to tumor or abscess There being no localizing symptom, I declined to operate, the pain, indeed, was referred always to one point, but I did not then feel that pain alone would justify exploration

At midnight, December 18, I again saw her in consultation The pain she said, was unbearable—so great she would violently beat her head against the wall unless guarded Her temperature was 100 degrees and she was delirious most of the time On the evening of the 19th she was in a critical condition—temperature 96 6 degrees, heart action feeble and irregular a low form of delirium still present, as death appeared inevitable I consented to trephine—upon both sides if necessary

December, 20, at 1 A M I made an incision along the line of the eyebrow to the base of the *nose*, dissecting the tissues upward sufficiently to allow the use of a gouge At a point about one inch above and a little internal to the orbit I opened the frontal sinus and then attacked the internal table As soon as the chisel entered the skull, pus began to pour out and when a sufficiently large opening was made fully one and a half ounces escaped The abscess was between the bone and dura, with the probe dead bone could be felt, believed to be necrosis of the ethmoid, *so I gently curetted with the sharp spoon* but hemorrhage caused me to desist I washed out the cavity with bichlorid solution and with Marchand's peroxid of hydrogen and finally filled in with much iodoform and inserted a drainage tube

My record for January 3 says "The pain ceased immediately after the operation, and the general condition improved rapidly The wound has been dressed every second day, *the cavity being thoroughly* irrigated with weak sublimate solution and then with hydrogen peroxid and filled with 10 per cent, iodoform emulsion, under which treatment pus has ceased discharging" The iodoform emulsion was used because I presumed the ethmoidal necrosis to be tubercular

On January 15 the external wound was healed, but a little pus was still discharging through the nose

I have frequently seen this patient since and there has been *no further trouble from the necrosis*—if there was a necrosis—and her health is perfect There never was any evidence of syphilis in this case

I do not give histories of cases from middle ear disease—they are too common, but as a result of my own experience, I can well counsel exploration in every case of suspected abscess of the brain, with the expectation of a favorable result in a large percentage of operations

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ORIGINAL ARTICLES

THE DISEASE RESISTING POWERS OF THE BODY

A REVIEW OF THE FOUNDATIONS OF NUCLEIN AND SERUM THERAPY

Read before the Biological Society of Chicago University, Feb 20 1895

BY CHAS T McCLINTOCK, M D, Ph D
UNIVERSITY OF MICHIGAN ANN ARBOR

When it was shown that bacteria were the cause of certain diseases, it was believed for a time, that if these bacteria by any means found an entrance into the body, disease must follow Until quite recently, popular writers on these questions left this impression with their readers

Pasteur noticed that in case an animal *recovered* from a germ-caused disease, the germs disappeared from the blood *and tissues* He also observed that, in some cases at least, after an animal had recovered from the attack it was more or less immune or insusceptible to the same disease That this immunity following one attack was true for many of the contagious diseases was indeed a matter of common knowledge Early *in his investigations* Pasteur noticed that some animals were readily affected by his microbes, while others were entirely immune, again, that in some cases, a young animal could be infected but not an older one Pasteur studied these matters and worked out an explanation for them He believed that his microbes were in some respects very delicate creatures, demanding particular kinds of foods, without which they could not grow He noticed that in his flasks the bacteria grew for a time, then ceased growing, although a considerable amount of food remained unused He concluded that their growth was stopped on account of the exhaustion of some essential part of the food He noticed that other germs might grow in these flasks after one species had ceased to grow Reasoning in this manner, he thought he saw a probable explanation for recovery and immunity A few anthrax germs had been *injected into an animal* and after some hours an examination of the blood showed that each drop contained thousands of these germs, and yet a few days later, in the favorable case where the animal recovered from the disease, the blood when examined contained few, or it may be, *no germs at all*

Pasteur reasoned that here the animal had served as a culture flask, and with the same result, as soon as certain *things in the animal's body* were exhausted the germs ceased to multiply and disappeared On this, the "exhaustion theory," as it is called, Pasteur based his hope for preventing and curing the contagious diseases Time will not suffice to give the details of his work on vaccines

In brief, his method was to take an attenuated germ, one that by exposure to unfavorable conditions had been weakened and enfeebled *With a small* quantity of this culture, he would then inoculate an *animal* This feebly growing germ, or vaccine, would gradually and without serious harm to the animal exhaust that particular substance necessary for its growth Having done this, the germ would die and disappear The animal having recovered from its vaccination fever, would then be proof against an attack of the most malignant germs of that kind The first two diseases studied by Pasteur in this way yielded *brilliant results* By his method, with attenuated cultures of anthrax, and chicken cholera, he was able to make very susceptible animals wholly immune to the most virulent forms of these diseases He concluded that the method could be universally applied, and made the remarkable statement that, "it is possible for man to eradicate every contagious disease from off the face of the earth"

Hundreds of workers attempted to apply this theory to the various bacterial diseases Gradually it was seen that the method would give satisfactory results in but few diseases, and that the theory was a poor one

In the same year that Pasteur's exhaustion theory was put forward, another and opposing one was advanced by Chauveau Chauveau reasoned that bacteria ceased to grow in our flasks and test glasses, not because some particular food is exhausted, but for the same reason that a higher animal or plant when confined, is gradually poisoned by its own excretions Whenever the excretory products of the bacteria reach a certain amount, they cease to grow, although there may be an abundance of food It had long been known that this was true for some of the higher plants Pasteur himself had shown that the yeast plant ceased to grow whenever the amount of alcohol which it produced reached 15 per cent

Chauveau explained that an animal recovered from an invasion of bacteria, if it could survive until these excretory products accumulated in such quantities as to gradually hinder and finally wholly arrest their growth Immunity, he said, was due to the fact that these excretory bacterial products were very slowly eliminated, and as long as they remained in the body they protected it from an invasion of the germs This theory was widely accepted and until the last two years was the most popular one It was essentially on this theory that Koch based his attempt to cure tuberculosis with tuberculin, which is essentially an old filtered bouillon culture of the tubercle germ So Klebs introduced diphtheridin for diphtheria

The theory underlying these attempts at cure was to introduce into the body, those products which arrest the growth of the germ in our flasks and tubes, and by so doing to stop the growth of the germs already in the body These attempts at cure were failures, and we now believe that they were wrong in theory

Pasteur's facts were all right, the germs do disappear with recovery from the disease and there is generally, more or less immunity How can we explain these things? These are all-important questions, for when we know how the body destroys disease germs then it is probable that we can discover some means with which to assist in the fight against these invaders

"As early as 1872, Lewis and Cunningham demonstrated the fact that bacteria injected into the circulation rapidly disappear

"In 1874, Traube and Gschiedlen found that arterial blood, taken under antiseptic precautions from a rabbit into the jugular vein of which 1½ c c of a fluid rich in putrefactive germs had been injected forty-eight hours previously, failed to undergo decomposition for months These investigators attributed the germicidal properties of the blood to its ozonized oxygen Similar results were obtained by Fodor and by Wysokowicz The latter accounted for the disappearance of the germs not by supposing that they were destroyed by the blood, but that they found lodgment in the capillaries

"The first experiments made with extra-vascular blood were conducted by Grohmann under the direction of A Schmidt in his researches upon the cause of coagulation It was found that anthrax bacilli, after being kept in plasma, were less virulent, as was demonstrated by their effect upon rabbits Grohmann supposed that in some way the bacteria were influenced by the process of coagulation

"In 1877, Fodor made a second contribution to this subject, and in this he combatted the retention theory of Wysokowicz One minute after the injection of 1 c c of anthrax culture into the jugular vein, in eight samples of blood, Fodor found only one colony of the bacillus Then he took the blood from the heart with a sterilized pipette and added anthrax bacilli to it This was kept at 38 degrees C, and plates made from time to time showed a rapid diminution in the number of germs, after a time, when the blood had lost its germicidal properties, the number of germs began to increase"

In 1888, Nuttall showed that defibrinated blood had this germicidal power Since then Nissen, Behring, Buchner, Haliburton, Hankin, Bitter, Christmas and others have worked on this question All of these observers find that the blood, within or without the body, has germicidal powers They find that this germicidal substance can be precipitated with alcohol, that it can be dried and when redissolved is as active as before Prudden found that ascitic and hydrocele fluids restrain the development of certain germs Other observers have shown that the humors of the eye have antiseptic properties Some of the experimenters conclude that the germicidal substance is serum albumin, others that it is a globulin, while all agree that it is some proteid

These experiments demonstrated the fact that the body had the power to kill at least some bacteria, but gave us little if any insight into how it was done About this time, that is, in 1884, Metschnikoff brought forward an explanation that seemed plausible, and has had and still has many advocates He believes that the white blood corpuscles together with the cells of the spleen, certain glands, and the cells lining the blood vessels have the power to take up and destroy the germs All of these cells have the power to put out pseudopodia It had been known for a long time that when small particles were injected into the blood, the white blood cells would pick them up and engulf them It was also well known that when a part of the body was injured, the white blood cells flocked to the inflamed part in large numbers

Metschnikoff concluded, that the function of these cells, which he named phagocytes, is to watch the avenues by which pathogenic germs may enter the body, and on their approach to engulf or swallow them and by a power of digestion to destroy them The theory attracted universal attention and admiration He also attempted to explain the migration of the white cells to a wound He found that certain substances attracted the cells, while certain others repelled,—that they did not swallow every particle that came in their way but had a selective power—this positive and negative chemiotaxis as he calls it, is used by him to explain many of the phenomena connected with cure and immunity He finds that certain bacteria attract and in turn are destroyed by the phagocytes while certain other more virulent ones, repel the phagocytes and so are left free to multiply, and harm their host It was soon shown, however, that blood outside the body, blood in which the phagocytes had been killed by freezing, still had the power to destroy bacteria

Some observers even went so far as to say, that Metschnikoff was wholly wrong, instead of the phagocytes swallowing and destroying the germs, these had invaded the phagocytes and were destroying them

Metschnikoff, however, has brought forward evidence by means of stains, enabling him to show the difference between a living and a dead germ, to show that in some instances at least, the phagocytes do take in and destroy the bacteria In certain other cases, however, as in gonorrhea, and mouse septicemia we must conclude from the enormous number of the germs present in a single phagocyte, and from their staining, that they have invaded the phagocyte, and multiplied at its expense

Some three years ago, Dr Vaughan and myself began some experiments on this question with the following results In a paper before the Pan-American Congress, at Washington, we stated our views as follows

From a careful and critical study of the investigations that have been briefly reviewed, we have come to the following conclusions

"1 The serum albumin is not the germicidal substance in blood serum As has been stated, either this must be true, or the experiment by which Buchner demonstrated that an active pepsin does not destroy the germicidal action of blood serum must have been an error, because peptic digestion readily and completely converts serum albumin into peptones, and we know that peptones are especially favorable to bacterial growth

"2 The germicidal substance must belong to the proteids Otherwise it would be difficult to explain the fact that a temperature of 55 degrees C renders blood serum inactive

"3 The only proteid likely to be present in blood serum and which is not destroyed by peptic digestion is nuclein

"Having reached these conclusions, the following questions naturally present themselves

"1 Is there a nuclein in blood serum?

"2 Has this nuclein, if there be one, germicidal properties?

"These questions we have attempted to answer

"Dogs and rabbits were the animals from which the serum was obtained Healthy animals that had not previously undergone any experimentation were selected In each case the animal was bled to death The flask containing the blood was placed in the ice-chest and allowed to remain for twenty-four hours By the expiration of this time, a wine colored serum had separated This serum was poured into a second sterilized flask and about ten volumes of a mixture of equal parts of absolute alcohol and ether were added This produced a voluminous precipitate that was nearly white This was allowed to stand twenty-four hours, and in some cases much longer, the alcohol and ether twice, or more often during the time, being decanted and replaced by equal volumes Then the supernatant fluid was decanted and an equal volume of 0 2 per cent solution of hydrochloric acid containing active pepsin was added, and the flask placed in an incubator at 38 degrees C, and the digestion was continued until the fluid failed to respond to the biuret test for peptones Each time this test was made, the fluid was decanted from the undigested portion and replaced by an equal volume of fresh digestive fluid In some instances the flask containing this fluid was allowed to stand in the incubator for several days This was not necessary in order to complete the digestion, but was allowed as a matter of convenience In all cases the digestion was prompt and proceeded to a certain point, when it ceased altogether The undigested portion was small in amount and grayish in color This was collected on a small sterilized filter and washed first with 0 2 per cent solution of hydrochloric acid, and then with alcohol After the washing with alcohol, the filter was allowed to stand exposed to air for half an hour or longer, in order that all of the alcohol might pass through or evaporate The precipitate was then dissolved in a sterilized solution of potassic hydrate The strength of this alkalin solution usually employed was 0 12 per cent Usually this solution contained in addition to the alkali 0 6 per cent of sodium chlorid In some instances a solution containing 1 2 grams of potassic hydrate, 6 grams of sodium chlorid, and 1 gram each of sodium bicarbonate and disodium hydrogen phosphate to one liter of water was employed as a solvent The solution was filtered through a Chamberland tube and received in a sterilized flask The solution thus obtained was perfectly clear, colorless, and did not respond to the biuret test

"We have now answered the first question Blood serum contains a nuclein We hope to investigate at some time in the future the relation between this nuclein and fibrin ferment

"The origin of the nuclein found now for the first time in blood serum is an interesting question Does it come from the disintegration of the polynuclear cells, or shall we regard white blood corpuscles as unicellular organs whose function it is to secrete this nuclein?

"In proceeding to determine whether or not this nuclein has germicidal properties, the solution was distributed in sterilized test-tubes, 5 c c being placed in each tube It should be stated that in dissolving the nuclein, the volume of the solvent employed was in all cases the same as that of the blood serum from which the nuclein was obtained These tubes were inoculated with different germs and plates made at varying intervals of time, in order to test the germicidal action One and the same platinum loop was used in the preparation of each plate"

A number of experiments were then given in detail, showing that this nuclein had very decided germicidal power

"We have made many other tests of the germicidal action of the nuclein obtained from blood serum, but as all of them gave practically the same results, further repetition is unnecessary

"The fact that the germicidal constituent of blood serum can be isolated has an important practical bearing Blood serum therapy has pronounced disadvantages, on account of the large amount of the fluid which must be injected Nuclein therapy now promises to enable us to avoid this difficulty, and possibly the near future may find us using this agent in the treatment of disease The nuclein may be obtained from an animal rendered immune to diphtheria, and a sufficient quantity of this injected into the blood or under the skin of a child suffering with this disease may effect a cure, but we will not prophecy The future will tell us what it has in store when the future shall have become the present"

Since this was written, some two years ago, nuclein has been used extensively in the treatment of tuberculosis, and as we think with remarkable success This work on the germicidal power of the nucleins has been confirmed by Kossel and others

It seems to me that we have found an explanation that covers all the facts claimed by those who hold the phagocytic theory, as well as those who hold that the fluids of the body are its defenders

Some one has suggested that the white blood cell is an unicellular gland whose business it is to secrete a germicide As is claimed by Metschnikoff, there are obvious advantages to the animal in having the germicidal constituents of its blood (partly) in the form of amœboid bodies Concentration at a desired place can be more easily accomplished, and the walls of the arteries and other tissues may be traversed without injury But these cells do not eat and digest the invading bacteria There are reasons for believing that they have no power to retard the progress of the invading bacteria until the constituents of the cells pass into solution

Metschnikoff now regards nuclein as the germicidal substance in the blood Suppose that it is shown that those indefinite substances which Hankin calls Defensive Proteids, Buchner Alexines, and Poehl Spermine, are nucleins, and that this substance is the one germ killing portion of the body, what have we gained?

How are we to explain the fact that of two individuals, living under the same circumstances, possibly of the same parentage, exposed to the same infective disease, the one takes it, the other escapes, or, both taking the disease, in the one, there is recovery and immunity to subsequent attacks, while the other dies?

How explain that at one age an individual is susceptible and at another immune to the same disease? That one animal is immune and another species very prone to die from a given germ? And above all how can we help the body in its ceaseless fight against disease germs? Some of the questions are as yet unanswerable, but day by day we are getting more light on these problems

I have, so far, spoken only of the germ destroying powers of the body It may be necessary to point out that in avoiding or recovering from disease, the body has to deal not only with germs, but also with their products

It seems probable that the harmful effects of germs are not, as a rule, due to their mere presence, but principally to the poisonous products which they elaborate In the case of tetanus the germs are found only in the neighborhood of the wound, while their effects are manifested, it may be, in every nerve and muscle in the body So in diphtheria, the germs are practically confined to the upper air passages, and yet we find the deleterious effects of the disease in every organ of the body These effects may be produced experimentally by injecting the filtered culture of the germ, without there being a single germ in the body The paralyses of diphtheria, or the tetanic conclusions of tetanus, can be produced at will in the laboratory with germ-free cultures

These poisonous germ products, whether produced in our test tubes or in the body are called toxins It is evident that if a child suffering from a severe case of diphtheria is to recover from the disease, it must be able, not only to destroy the germs themselves, but also to dispose of or destroy the toxins produced The substances capable of destroying these soluble poisons are known as antitoxins What are these antitoxins?

It may be well to point out, that the phenomena with which we are here concerned can not be explained, as was once supposed, by any theory of toleration We know that there are many poisons, such as nicotin, arsenic and morphin, which when given in gradually increasing doses induce a tolerance on the part of the tissues so that eventually, many times the normal lethal dose may be taken without any serious manifestations It can be shown that this effect is not due to any increase in the power of the body to destroy these drugs, in fact this power decreases Not so, however, with the bacterial toxins, these are actually destroyed or rendered inert

We take six guinea pigs, and give to each of them 1 c c of this diphtheria toxin This toxin has been tried on some twenty or thirty guinea pigs and is uniformly fatal in one-half c c doses In a short time after injecting the toxin—on the opposite side of the body we inject into one of these pigs one-tenth of a c c (one drop) of this antitoxin, in another two-tenths, in a third five-tenths The remaining three we leave with the toxin alone I am describing experiments just as they were made in our laboratory some three weeks ago, and with these substances which I have here

In forty eight hours we find that the three pigs which received the poison alone, are all dead, the three receiving both toxin and antitoxin are alive and well We take six more pigs Into two of these we inject to day one drop each of the antitoxin, twenty-four hours later we inject 1 c c of the toxin These pigs never show at any time any symptoms of disease

In a test tube we place 2 c c of the toxin and 2 drops of the antitoxin, after standing one hour one-half of this mixture is given to each of two pigs, these also show no sign of disease The remaining pigs are given 1 c c each of the toxin and as in the preceding experiment are dead within forty-eight hours

These experiments may be continued until many times the fatal dose of toxin is given, but if an appropriate quantity of the antitoxin is administered, no harm comes to the animal Here there is a poison destroying power What do we know of it? and how can the substance be produced?

We find here, just as when we study the bacteria themselves, that for a given germ or its toxin, certain animals are quite susceptible, others withstanding large doses of germ or toxin or, as we say, are immune This immunity may in certain cases be borrowed from one animal and given to another Thus one drop of the blood of a dog or frog, animals naturally immune to anthrax, if injected into the white mouse will effectually protect it against an inoculation of the anthrax germ It makes no difference whether the drop of blood is injected several days before, or some hours after the inoculation with the germs This, one experiment, and there are many similar ones, would at once suggest to us that the problems of cure and of immunity are closely connected, if not identical

Now immunity may be natural or acquired "Natural immunity may be peculiar to the species or race, or to the individual An example of natural immunity is that of the domestic fowl to anthrax As has been shown by Lazarus and Weyl, the chick, even at the time of coming from the shell, is immune to the most virulent culture of the bacillus anthracis It is true that this animal may be made susceptible to anthrax, but this is an artificially-induced susceptibility The immunity is natural to this bird at every period of its life Another example of racial immunity is that of the frog to anthrax This animal can also be rendered susceptible, but again it is true that the susceptibility is artificial and the immunity is natural Racial immunity must be inherent in the parent cell

"The natural immunity, which is peculiar to the individual, usually comes with adult life The young are susceptible to a given disease, but adults of the same species lose this susceptibility and become immune The young rat is susceptible to anthrax, while the adult is naturally immune, but can be rendered susceptible by exhaustive exercise The child is highly susceptible to scarlet fever and diphtheria, while the adult, though not wholly immune to these diseases, loses very much in susceptibility and is likely to become infected only when greatly reduced in vitality or after prolonged and aggravated exposure to the poison" In addition to the natural immunity due to race or age we have artificial or acquired immunity, as in the case of the mouse previously mentioned

In 1880 Pasteur first showed that susceptible animals might be made more or less insusceptible to a contagious disease, and from that time to the present this artificial, or acquired immunity, has been the most interesting and important of bacteriologic problems

Do natural and artificial immunity differ in degree only or in kind? This is an important question and one as yet undecided The majority of investigators, following the lead of Behring, say that they differ in kind, that the germicidal and antitoxic powers are two different things This is possibly true, and yet there are facts going to show that these are questions of degree only In the last three weeks we have shown in our laboratory that nuclein from the yeast cell, has antitoxic as well as germicidal powers A series of sixteen guinea pigs were treated for several days with yeast nuclein in varying amounts, they were then inoculated with twice the fatal dose of diphtheria toxin Those pigs which had received doses of less than 2 c c of the nuclein, together with the control animals died, those receiving larger doses were not affected by the poison The experiments were repeated with the same results In a similar manner, rabbits have been made immune to tuberculosis and to pneumonia The immunity to pneumonia is noteworthy, as these animals are very susceptible to the germs of this disease

Aronson has shown that the blood of the untreated white rat has considerable antoxic power against the diphtheria toxin, Behring and Wernicke to the contrary notwithstanding Guinea pigs that had been treated with such blood showing marked increase in their resistance to diphtheria poison

You will have noticed that all the work I have quoted has been the outcome of theory, and nowhere is the value of the scientific imagination shown better than in the results of bacteriology "Again and again it has been shown that the value of a theory does not wholly depend upon its truth, but is rather to be measured by the fruitfulness of the lines of investigation that it opens Indeed, a theory may be wholly erroneous and yet it may lead to most important discoveries"

Our theories of immunity, of the relation of acquired to natural immunity will have important bearings on the future of this work At present, however, the attention of bacteriologists is attracted to the brilliant results that have been obtained in artificial immunity It has been demonstrated, for example, that a horse, an animal very susceptible to tetanus, can be made so immune to the disease that it will withstand several million times as much of the tetanus toxin as would kill another and untreated horse

The results in the treatment of diphtheria have been such as to elicit worldwide interest Among the first workers in this line was Ehrlich At that time it was impossible to obtain the bacterial poisons, toxins, with any degree of uniformity in their poisoning power So that Ehrlich selected two poisonous proteids or toxalbumins that had been obtained from the higher plants, as he could get these in relatively large quantities and with uniform toxic powers These substances were ricin, obtained from the castor oil plant, and abrin from the jequerity bean

This substance, ricin, is the most powerful poison we know The contents of this bottle, 1 gram, 15 grains, Ehrlich estimates is sufficient to kill 1,500,000 guinea pigs By giving his animals very minute and gradually increasing doses of these poisons, now in food, again hypodermically, and again by rubbing a weak solution on the *conjunctiva of the eye*, he was able at last to get them so immune that they would withstand several hundred times the fatal dose for an untreated animal

He showed the best and quickest way to secure this immunity, and also the very important fact that his animals rendered immune to one of the poisons, say ricin, showed no immunity to the other one but were killed by it in the same dose that was fatal to the untreated pigs Ehrlich went further, and showed that his animals did not merely tolerate the poisons, but destroyed them He was indebted to Behring and Kitasato for this idea, they having in the meantime made the fundamental discovery that the immunity in diphtheria and tetanus was based upon a certain ability of the blood to neutralize the bacterial poisons With this in mind, Ehrlich at last found that such a substance existed in his immune animals These substances he called anti ricin and anti-abrin This discovery was the basis for all that we know of antitoxins

Behring and Ehrlich next established the fact that the blood taken from immune animals rendered other animals immune Discoveries now followed each other in rapid succession Ehrlich demonstrated that the offspring of an immune mother was for a time immune Further, that the immunizing or antitoxic substance was present in the milk of the the immune mother, and could be transmitted in the milk of an immune nurse, even when the nursling was no relation to the nurse, and the offspring of very susceptible parents This gives us an explanation for the well-known, but heretofore little understood fact, that the suckling is more or less immune to several diseases to which it is very susceptible after weaning, as scarlet fever, measles, etc

Further experiments led to a method for quantitatively estimating the value of the antitoxins, and the duration and degree of the immunity The results of these discoveries are far reaching By appropriate treatment we can give an animal such a high degree of immunity to a certain disease, that a relatively small quantity of its blood or blood serum, will contain sufficient poison destroying power, or antitoxin, to neutralize all the poison produced in an ordinary case of this disease The blood serum of this immune animal we can borrow without detriment to the owner, we can bottle it, preserve it, if need be send it thousands of miles and there give its hoarded strength to one in need

The method of immunizing animals against tetanus and diphtheria has been published so widely that I pass it by As to the results of the antitoxic treatment in these diseases I may say, in brief, that the mortality in tetanus has been reduced from 80 to 20 per cent In diphtheria, an average of many estimates shows a death rate diminished one half under this treatment Behring believes that the mortality will not exceed 5 per cent if the treatment is begun within forty-eight hours after the attack Roux holds that the treatment is not very effective in those cases complicated by a streptococcus infection But these figures, good as they are, a saving of one-half of the children who die of this dread disease, do not nearly represent the value of antitoxin Its greatest promise is in the way of immunity, prophylaxis We will have little need of a cure for diphtheria if every child exposed to the disease can have an injection of antitoxin and thus escape an attack This result is promised by this new remedy

Now to return to a question previously raised, How do the antitoxins neutralize or destroy the toxins?

We have seen that when a lethal dose of toxin is injected it fails to have any harmful effect, if, at the time a sufficient quantity of antitoxin is injected The results are the same whether we mix the antitoxic serum with the toxin and inject both together, or we inject them separately in different parts of the body, or finally, whether we inject the antitoxic serum twenty-four hours before injection of the poison It is quite different, however, if we inject the antitoxin some time after the injection of the poison The longer we delay the more unfavorable is the prospect of cure, the greater is the quantity of antitoxin required, and the more uncertain becomes the result

Behring and his followers hold that toxin and antitoxin chemically neutralize each other and are both changed or destroyed in the process, just as when an acid and a base form a neutral salt—unite and neutralize each other But there are, possibly, other explanations of this phenomena

Many experiments go to show that when we mix toxin and antitoxin in test tube and then inject the mixture into an animal the toxin is destroyed but some antitoxin remains, capable of protecting the animal against small doses of the poison subsequently injected

On the other hand, if the toxin alone is destroyed, we should expect that in our test tube mixtures, after a certain length of time, all the toxin would be destroyed and the antitoxin remaining would be capable of destroying a fresh quantity of the toxin—just as pepsin is capable of converting an indefinite amount of proteid into peptone But experiments fail to justify any such conclusion

These and similar experiments lead us to doubt the direct poison destroying of toxin by antitoxin If that were true it should make no difference, except in quantity, at what stage of the disease we injected our antitoxin We have seen, however, that it does make a great difference, often requiring in diphtheria five hundred times the dose to save an animal twenty four hours after infection as before The dose needed to cure in tetanus is a thousand million times the immunizing dose Buchner carried out the following ingenious experiment Ten white mice and ten guinea pigs were given injections containing 1-10 mg of a tetanus toxin As was to be expected, all the mice died with pronounced symptoms of tetanus poisoning The guinea pigs lived, only a few of them showing transient symptoms of the disease In the second experiment, twenty-three mice and twenty-three guinea pigs were used Each of them received 14 mg of tetanus poison, one hundred and forty times the amount which in the first series was sufficient to kill the mice But with the tetanus toxin, 1 35 mg of an antitoxin had been mixed Through this quantity of antitoxin the activity of the tetanus poison was almost destroyed Nine of the mice were unaffected, eleven showed slight symptoms of the disease, while only three died

As in the previous series 1-10 mg had proved uniformly fatal to the mice, we must conclude that in this experiment the larger part of the toxin, certainly 13 9 mg had been destroyed, otherwise the remaining 1-10 would have certainly killed the animals Now exactly the same dose of toxin and antitoxin is given the twenty-three guinea pigs

The previous experiment has shown that 1-10 mg of the poison has but little effect on the guinea pig, this experiment seems to show that the antitoxin present is sufficient to destroy all but 1-10 of the poison in the mixture, hence we should expect to find little if any effect on the guinea pigs On the contrary, eight died of marked tetanus, twelve showed chronic tetanic symptoms, and only three remained unaffected, showing conclusively that the antitoxin could accomplish results in the body of the mice which it could not in the guinea pig

A study of this and other experiments, it seems to me, must force us to the conclusion that there is no destructive action of toxin by antitoxin, either in the test tube or in the body, but both substances act only through the intermediation of the cells of the body or, in other words, the action of the antitoxin is only an immunizing not a destructive one There is in the strict sense of the word, no "antitoxin," but instead an immunizing substance

Again the question, What is immunity? Before attempting any speculations on this question, it is necessary to call your attention to some facts regarding the nature of toxins These, all are agreed, are albuminous bodies, toxalbumins as they are called—related to the poison of stinging insects, the venom of serpents

Roux and Yersin in Pasteur's laboratory were the first to demonstrate the nature of these substances They regarded the poison as a sort of enzyme or soluble ferment This view has been adopted by Brieger and Fraenkel This was the only way in which they could account for the intensity of the poison By a ferment action, splitting up the albumins in our culture fluids, or in the body, they could account for the poisonous effects of the bodies But in the laboratory of Straus, in Paris, it was shown that there was no diminution in the diphtheria poison when the germs were grown in albumin free urine Buchner, in Munich, grew his tetanus germ in a solution of asparagin and mineral salts Here, there could be but one source of the proteid poison, the cell contents of the bacteria themselves Buchner concludes that the tetanus toxalbumins spring directly from the plasma of the tetanus cell

Most writers on this subject assume that bacterial poisons are secretions or excretions of the germs producing them But the ordinary method in use for obtaining the toxin of diphtheria disproves this In our flasks of bouillon inoculated with the germ of diphtheria and kept at body temperature, there is every reason to believe that all growth and reproduction of the bacteria come to an end after two or three days, and yet before this fluid has attained its greatest toxicity it must be kept for some three months Now what happens in that time? If we examine portions of the culture from time to time with the microscope, we notice that the germs gradually lose their staining reaction and are slowly macerated and finally dissolved in the bouillon The filtered *fluid which at the end of three days had very little* toxicity is now intensely poisonous Here again we are led to believe that the source of the poison is in the bacterial cell But I can not agree with Buchner that it comes from the cell plasma In the last three weeks I have attempted to extract the poison from fresh cultures of the germs By using the ordinary methods for extracting nuclein I have obtained an exceedingly poisonous substance, giving when injected, apparently the same symptoms as the toxin obtained from old cultures If the bacterial poisons are nucleins it will help us to explain the phenomena of immunity and cure That they are nucleins seems to me altogether probable even on theoretical grounds The poison of the tetanus cell differs markedly from that of the diphtherial, the one produces tetanic convulsions, the other complete paralyses Now we have many reasons to suppose that the protoplasm of all cells is much alike—that which gives the cell its morphologic or physiologic individuality comes from the nucleus

I am aware that there are facts opposed to this view and I only offer it as an hypothesis Brieger and Fraenkel have shown by analysis that tetanus toxin contains neither phosphorous nor sulphur Malm has shown that a purified tuberculin contains no sulphur How can they be proteids, much less nucleins? But the albuminous substance of the bacterial cell, according to Nencki, "is not precipitated by alcohol, and differs in its chemic composition from other known substances of this class" He calls it *mylo protein*, and says that it contains no sulphur and no phosphorus If these observers are right we must enlarge or modify our views as to the nature of proteids

With all the preceding facts before us, what insight do we get in the problems of immunity and cure?

Pasteur's "exhaustion' theory asks us to believe that in case of natural immunity there was lacking in the organism a something necessary to the life of the microbe, that in acquired immunity, the attack of the disease—the growth of the germs within the body had exhausted this necessary food and until it was replaced the animal was immune This theory is no longer sustained by Pasteur, or his pupils, and is evidently untenable

The "retention" theory as proposed by Chauveau, is subject to similar objections To suppose that an individual who has had scarlet fever, diphtheria, measles, smallpox, etc, retains in his body certain products which are capable for years, or even a life time, of protecting the body against these diseases is to ask a great deal of our credulity Note that the theory requires a separate substance for each of the diseases The child who has had, and is now immune to diphtheria is still susceptible to measles, etc Moreover, we must under the theory suppose that the diphtheria poison for example, which now affects the organism so powerfully, is after recovery retained in the body without any deleterious influence That the body could retain so many different poisons, for such lengths of time, and that these poisons could be tolerated with no ill effects seems to me to be bad physiology and poor theory

Sternberg has elaborated a theory of immunity based on the idea of tolerance [illegible] ons Without giving the arguments advanced for and against this theory, I may say that, as it seems to me, there is abundant experimental evidence to show that these poisons are not merely *tolerated*, *they are destroyed* or at least disposed of

Metschnikoff on his "phagocytic" theory would explain immunity in this way Immunity and cure are essentially the same thing, or as he expresses it "most often immunity is but recovery in operation from the very onset of a disease" Disease germs which are not very malignant to the body exert a positive chemiotaxis or attractive power for the phagocytes, these in turn swallow the germs and destroy them This ability to destroy the germs, and to be attracted by them, increases with use and is hereditary Hence in the case cited, sooner or later the germs are overcome and on account of the educational process which the phagocytes have gone through, they retain for a longer or shorter time this power, or there is immunity

Artificial or induced immunity, he explains, by supposing and in some cases demonstrating, that when there is negative chemiotaxis for the malignant germ, for the attenuated germ there may be a feeble positive attraction, this is increased by use until gradually the most virulent germs of this kind attract the phagocytes only to be destroyed So when the tissues are gradually subjected to bacterial poisons, in this method of immunizing, the phagocytes are gradually educated

I feel that I should apologize for such a brief and unsatisfactory presentation of the really beautiful and weighty theory of Metschnikoff

I wish to call your attention to one more theory in regard to immunity This is a theory advanced by my teacher, Vaughan, of Michigan For the most part I shall use his own words

"There are three methods of inducing immunity which reduce themselves to one and the same principle, i e, the introduction of germ nuclein into the body This nuclein may be either inclosed in the cell wall or in solution These methods are 1, by the use of very small numbers of the virulent germs, 2, with living bacteria modified and reduced in virulence, attenuated culture, 3, dead bacteria morphologically intact or in solution In all cases the cause that brings into existence the condition of immunity is a bacterial proteid I call these proteids, and I wish it to be understood that I do so tentatively, and that I recognize the fact that the exact chemic nature of none of them is known, but for the present we may call them proteids For reasons already given, I believe that the proteids which induce immunity belong to the class of nucleins"

How can we explain immunity with these facts before us? Briefly thus the nucleins of the animal body have the power, or under certain conditions may be so trained or educated that they assimilate the bacterial nuclein We have seen that toxin must be regarded as a specific product of the bacterial cell Toxin and antitoxin from their very nature should be closely related, possibly only different modifications of the same substance The fact that one is poisonous and the other not, that the one heals while the other kills, does not contradict this assumption We have many examples of closely related substances which differ widely in their physiologic effects From the comparatively harmless cholin the very poisonous neurin is produced by the simple abstraction of water

"These different nucleins, that of the bacterial cell, and that of the blood, may be isomeric bodies, one of which may be designated as the α-compound, and the other as the β-compound, and one of these by simply causing a rearrangement in the atoms within the molecules of the other may assimilate the second We do not mean to say that the process by which a nuclein assimilates another proteid is as simple as would be indicated by these examples, but they may suggest something of the nature of the chemistry of assimilation We may assume that when an alpha-nuclein and a beta-nuclein are brought together, one will assimilate the other, and which one will absorb the other, will depend upon the relative strength or vitality possessed by them, and in measuring this strength several things must be taken into consideration A vaccine has less of this power of assimilation than a germ of full virulence, and a nuclein in a sterilized culture less than either of the others

"An organ that has once been stimulated by a given excitant responds more quickly the second time to the same excitant, provided that the interval of time is not too great This explains the gradual loss of acquired immunity

"Again, an organ that is stimulated by one excitant may not be responsive to another, and this accounts for the fact that an animal rendered immune to one disease remains susceptible to another

"We can suppose that the process of immunizing an animal proceeds in something like the following manner The modified virus of tetanus is introduced into some distant part, in some unknown way, the spleen is stimulated to action, and secretes a nuclein which is carried partly in solution, partly in the form of multinuclear cells to the invaded part of the body, and the tetanus poison is converted into the nuclein coming in contact with it, or is otherwise rendered inert Later, a larger quantity of the tetanus poison is introduced, and now the spleen acts more promptly and energetically than before This promptness and energy of action are increased by exercise and, finally, an amount of tetanus culture, of full virulence, sufficient to kill an animal whose spleen has not been subjected to this training may be introduced without ill effect On this theory, the production of immunity consists in a special education of certain cells"

Now what have we learned from this review of these theories and experiments? We have seen that the body has the power to kill bacteria, that this power resides chiefly if not wholly in its soluble nucleins On this fact is based nuclein therapy We endeavor to aid the body when it is engaged in a losing fight, by giving it a nuclein closely related to its own, which it can readily assimilate and in turn use as a defensive agent

We have seen that the body has a poison destroying or antitoxic power, that we can increase this to an enormous extent in certain animals, and that we can borrow this power from one animal and lend it to another On these facts serum therapy is based

We have seen that there are some reasons for believing that these germicidal and antitoxic powers are related, that in a strict sense there is no antitoxin but only an immunizing substance, that the problems of cure and immunity are probably identical And I trust that we have seen that nucleins and antitoxins are not chance discoveries, but are the results of the investigations of many workers A theory here, an experiment there—step by step—until at last the bacteriologist offers to humanity the results of his labors

In conclusion Men have for ages sought to find specific remedies for diseases There are but few substances,—mineral, vegetable, animal or the products of the chemist, but have been tried These attempts have been well summarized by Rossbach as follows "For thousands of years mankind has experimented in this direction and the result has been the discovery of but four remedies for three diseases It would be a terrible idea, that some other thousand years were necessary to detect another four remedies The usual way of proceeding is too dangerous Especially harmful proves the enthusiasm, not to say dishonesty of many observers If by chance, a physician has found a remedy, after the application of which one or two cases of an infectious disease have quickly recovered, the success is at once attributed to the medicine No thorough investigation on a larger scale is made, the new 'specific' has been discovered and is emphatically recommended"

We are learning better methods Before attempting to find remedies we study the etiology of a disease Having found the cause,—its noxious principles,—the way in which it harms, we then endeavor to discover the agents with which the body combats the "disease powers" Then, and not until then, are we in a position to intelligently seek for remedies With this method, medicine seems to be entering on a new day

The brilliant results that are being obtained in tetanus and diphtheria lead us to hope that many it may be most of the contagious diseases may be subdued With the same methods, experiments more or less successful have been made with septicemia, erysipelas, typhoid fever, tuberculosis etc But when we remember that two-thirds of mankind die of germ caused diseases we hesitate and fear to prophecy

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THE MEDICAL COLLEGE FRATERNITY, NU SIGMA NU

BY BAYARD HOLMES, M D (Eta Chapter)
CHICAGO

Perhaps this effort to bring a college fraternity to the notice of the medical profession will not be approved by many public-spirited physicians The wars between the Greeks and the barbarians are still going on in all our American colleges and universities Much can be said for and against the fraternities as they exist or have existed Medical men are no exception to the mass of educated men in being prejudiced either for or against the Greeks This article is written to inform, not to convert

The introduction of fraternities into medical schools marks a distinct stage in the development of medical education While the medical college was open only a few weeks each winter for bombastic lectures embellished with obscene stories on the part of teachers and for boisterous cramming on the part of students, all repeated once or twice on successive seasons, there was neither time nor incentive for fraternity life The medical students of those halcyon days rarely knew many of their classmates in after life As times and customs changed and the medical term was extended to eight or nine months for each of three or four successive years, the medical college became the home of a social unit It was natural that the precedent of the literary colleges in America should be followed by the students in these new medical centers and that Greek letter societies confined to medical schools should accordingly be established

There are traditions of little fraternities in nearly all of the older colleges None of these, however, attempted to become national in character until the establishment in a formal way of the Nu Sigma Nu at Ann Arbor From a humble beginning at the University of Michigan in 1882, this order now numbers nine chapters and a membership of about one thousand The membership in each chapter is limited to eighteen active student members The existing chapters are

Α Alpha, University of Michigan (1882)
Β Beta, Detroit College of Medicine (1889)
Δ Delta, Western Pennsylvania Medical College (1891)
Ε Epsilon, University of Minnesota (1891)
Ζ Zeta, Northwestern University (1891)
Η Eta, College of Physicians and Surgeons, Chicago (1892)
Θ Theta, University of Cincinnati (1892)
Ι Iota, College of Physicians and Surgeons, New York (1893)
Κ Kappa, Rush Medical College (1893)

Gamma Chapter has surrendered its charter

The order stands for high scholarship and professional integrity Its teachings are of the highest ethical character and the discipline of the order has been mild but effective There has so far been no manifestation of snobbery, which is the rock upon which many fraternities break Perhaps the spirit of the fraternity can be best exhibited by relating some experiences in the Eta Chapter This chapter was organized three years ago Over half the men were graduates of literary colleges and the active members have always been and are men of superior education and ability Nearly all are total abstainers At the banquets of this chapter no intoxicants have ever been used A majority of the present active members live together in a flat which is called the Chapter House It has been a great pleasure to me to drop in and see a little of the life there The rooms are very pleasant and are furnished like a modern home Music and pictures give the convivial spirit of community expression An occasional visitor keeps alive the genial spirit of hospitality For a few days, one of the fraters was sick and I found him well cared for by the other residents The table is furnished by the occupants of the adjoining flat It is not what one would call lavish, but it does very well and is dignified and satisfactory The Chapter House is not only the home of the students but it is also the home of the chapter and the place of all regular meetings and entertainments The influence of this chapter in promoting fraternity life seems to be very great An older man looks with great satisfaction at the growing friendships which he sees in the relatively young under his instruction and care

In this chapter the most favorable reaction of the stronger and rougher upon the weaker and more refined has been observed, of the true and exacting upon the politic, of the genial and effusive upon the reserved and diffident It is not difficult to predict for the men who thus live together,—all for one and one for all, in this little social community,—great pleasure in after life from these well cemented friendships Each one has been a gainer Each one has become a truer man, a better student, and will be a broader physician from the culture of this fraternity life A few of the residents are working for honors and hospital positions No records have yet been made

In the college, the sentiment was for a time strongly against the fraternity and fraternity men By a very carefully executed policy of non-interference and non resistance and by a concerted effort at conciliation, nearly all the opposition has now subsided A chapter of the medical order of *Π Ρ Σ*, has lately been introduced with a full membership among the very best men in the institution, and this, it is hoped, will allay the remaining prejudice against the older fraternity

The last grand council of the order was held with Zeta Chapter during the World's Fair Prof Nicholas Senn gave the council a complimentary clinic at Rush Medical College and a banquet was held at the German Press Club John L Irwin, M D, was elected Grand President, and W J Lyster, Harper Hospital, Detroit, Acting Secretary A directory of the fraternity has lately been published The names of many members of the faculties of the colleges in which chapters are located are to be found in this directory as honorary members Some of the most distinguished physicians and surgeons in the country are thus enrolled With careful discipline and a discrete propaganda, the Nu Sigma Nu will be a powerful factor in medical life and education during the next twenty years

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PERITONEAL SUPPORTS—(LIGAMENTUM PERITONEI)

BY BYRON ROBINSON, M D

PROFESSOR OF GYNECOLOGY POST GRADUATE SCHOOL, CHICAGO

The peritoneal supports of the abdominal viscera have received different names and appellations In the Latin language they all come under the term, ligamentum, but in the general English in vogue the supports are called *a*, ligaments, *b*, mesenteries, and *c*, omenta The term, ligament, is applied to a fold of peritoneum which supports the more solid portions of the digestive organs as the liver, pancreas and spleen, yet is not restricted to these organs but is applied to the peritoneal supports of the genito-urinary organs The term, omentum, is generally applied to a fold of peritoneum which stretches from the stomach to some other organs There are three omenta stretching from the stomach to the liver, colon and spleen The term, mesentery, is applied strictly to the small intestinal support, but general usage extended it to the supports of the four parts of the large bowel The synonyms for the term, mesentery, are, mesaraion, mesaræum, medianum, membrana pinquis intestinorum, Lactes, Mesenteron, meseræum, mesoræum medium intestinum and epichordis Latin, *mesenterium,* French, *mesentere* and German, *Gekröse* Some writers apply the word, mesentery, to the whole of the peritoneal supports The utility of the peritoneal supports are

1 To retain an organ in a definite position

2 To hold the viscera in definite relations so that entanglement is prevented To prevent volvulus strangulation, dislocation or misplaced pressure

3 To limit the viscera in physiologic and anatomic relations

4 To allow sufficient independent motion for the viscera to functionate From the peritoneal supports allowing such freedom by slender neuro-vascular styles on the various viscera, arises the difficulty of acquiring accurate anatomic knowledge of visceral anatomy The difficulty of acquiring correct views of visceral relations consist of three peculiarities of the viscera, viz , *a*, the abdominal organs allow a wide range of movement without becoming dislocated, *b*, the organs can alter their conditions without losing their integrity to return to normal, *c*, they are highly endowed with elasticity

5 The supports serve to some extent to prevent hernia

6 A special utility of supports is to transmit vessels and nerves to viscera

7 The elongated visceral supports allow the organs to pass through their rhythm

8 The supports allow the law of compensation, *e g*, when one viscus enlarges the elongated supports of others give them a chance to glide out of pressure, out of the way of harm

9 The most common pathologic condition of peritoneal supports is elongation (frequent after 35 years of age)

10 Anomalies of peritoneal supports are not common Their origin is nearly always due to peritonitis

The following table of the chief peritoneal supports I have prepared for the purpose of noting the English and Latin appellations of the same, and also to show at a glance the variety and kind The scope and number are more easily comprehended in a compact diagram

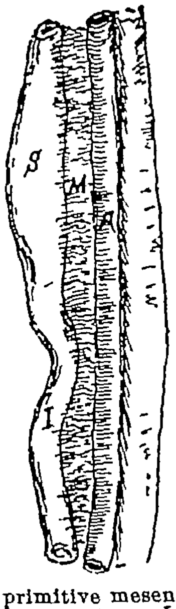

Fig 1—Represents the primitive mesentery and digestive tubes of mammals S, stomach, M, mesentery, I, intestine, A, aorta The straight digestive tube is suspended from its dorsum by a simple double bladed membrane

Suspensory ligament of the liver (Ligamentum suspensorium hepatis)
Round ligament of the liver (Ligamentum teres hepatis)
Right lateral ligament of the liver (Ligamentum triangulare hepatis dextra)
Left lateral ligament of the liver (Ligamentum triangulare hepatis sinistra)
Coronary ligament of the liver (Ligamentum coronarium hepatis)
Gastro-splenic ligament (Ligamentum gastro lienale)
Phreno splenic ligament (Ligamentum phrenico lienale)
Left costo colic ligament (Ligamentum phrenico colicum sinistra.)
Right costo colic ligament (Ligamentum hepato colicum)
Hepatico colic ligament (Ligamentum hepato-colicum)
Ascending mesocolon (Mesocolon ascendens)
Descending mesocolon (Mesocolon descendens)
Transverse mesocolon (Mesocolon transversum)
Lesser omentum (Ligamentum gastro hepaticum)
Greater omentum (Ligamentum gastro colicum)
Gastro splenic omentum (Ligamentum gastro lienale)
Phrenico-esophageal ligament (Ligamentum phrenico esophageal)
Mesentery (Mesenterium)
Broad ligament of the uterus (Ligamentum latum uteri)
Round ligament of the uterus Ligamentum teres uteri)
Utero sacral ligament (Ligamentum sacro uteri)
Utero vesical ligament (Ligamentum vesico uteri)
Gastro pancreatic ligament (Ligamentum gastro pancreaticum)
Infundubulo pelvic ligament (Ligamentum infundubulo pelvicum)
Posterior ligament of the bladder (Ligamentum recto vesicale)
Lateral ligaments of the bladder Ligamentum vesico laterale)
Suspensory ligaments of the bladder (Ligamentum suspensorium vesicale)

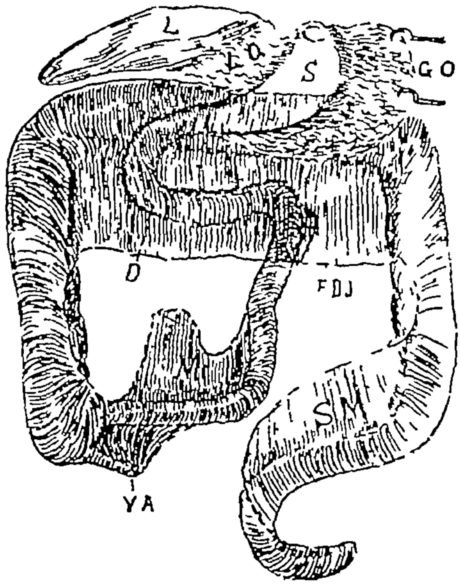

Fig 2—Represents the final peritoneal structure in man L, liver, L O, lesser omentum, G, O, great omentum drawn aside by two hooks, D the outline of the duodenum, F, D, J, fossa duodeno jejunalis M, mesentery, S, M, meso-sigmoid, Y, A, appendix with its mesentenolum,

THE MESENTERY

In various valuable works it will be observed that the word mesentery, is used to embrace all that is finally covered by the word, peritoneum I wish at this place to discuss the origin of the mesenteries—the neuro-vascular pedicles of the viscera

The works of Toldt and Gegenbaur may be mentioned as samples of such titles as the mesentery The digestive tract is so intimately associated with the peritoneum that they are both studied together, as may be noted in Treves' little pamphlet, "Intestinal Tract and Peritoneum in Man " In the present work I shall consider the development of the digestive tract and peritoneum together, and that the development of the one can not be comprehended without the other. There can be no serous cavity without viscera The viscera produce the cavity by their presence and advancing growth The moving viscera and independent moving of adjacent walls are accountable for the serous lymphatic sac In fact, the very relation of sac to organs also shows one depends on the other, for the peritoneum envelops the organs, without inclosing them, like a tightly fitting night-cap A good illustration of the peritoneum is a frieze on a house, where the figures are represented in relief, but all the elevations and depressions are covered The figures are thrust forward on the frieze, invaginating or carrying the surface with them The idea of the inseparability of the abdominal viscera and the peritoneum can not be more forcibly impressed on the reader than to say that arrest of visceral development is nearly always due to peritonitis, *e g*, the non-descent of the cecum, which I have seen six times, was in each case due to old or recent peritonitis

A mesentery in general consists of a double fold of peritoneum, which partially invests a viscus No viscus is entirely covered by peritoneum The point on the organ where the membrane diverges to envelop it, leaves a space uncovered by peritoneum A mesentery is generally considered as such when its blades after diverging again come in contact before reaching the line of parietal insertion As illustration of this idea the right or left colon may be taken If the peritoneum covering the anterior and lateral surfaces of the colon does not come in contact between the posterior surface of the colon and dorsal wall we say there is no meso colon With no meso colon the posterior surface of the bowel is in contact with the connective tissue of the dorsal abdominal wall Should there be a mesentery of the colon, the layers of peritoneum which invest the lateral and anterior bowel surface approach to contiguity between the bowel and dorsal wall In human anatomy the word, mesentery, is by general consent limited to the small and large bowel

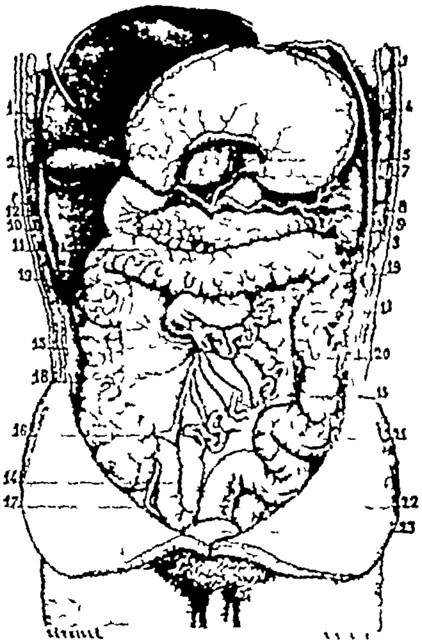

Fig 4—Represents the mesentery with the chief part of the small intestine cut away (after Sapper)

As the digestive canal is developed, the *peritoneum* is also developed The double layers of peritoneal membrane anchor the canal to the posterior abdominal wall and this anchorage is the mesentery That part of the mesentery which passes to the stomach is called the mesogaster, anterior or posterior At this point we have both a posterior and an anterior mesentery Beginning at the middle line of the dorsal wall two layers of peritoneum (*mesogastrium posticum*) pass to the posterior border of the stomach These two layers of peritoneum diverge, pass forward on each side of the stomach and again come in contact on the anterior border or lesser curvature, after which they (mesogastrium anticum) *pass to* the anterior abdominal wall That portion of the double fold of peritoneum which extends from the liver to the abdominal wall and down to the umbilicus and is known as the *suspensory* ligament (ligamentum suspensorium) of the liver is a part of the anterior mesogater The mesogastrium anticum or lesser omentum has deviated from the middle line to the right, away from the remnant of umbilical vein, by the irregular and rapid growth *of the liver* The remainder of the digestive canal has no *anterior* mesentery, having lost it by absorption or atrophy In human anatomy the mesogastrium posticum and anticum bear the names of greater and lesser omentum They are then mesenteries with other acquired names As long as the digestive canal maintains its original straight course the relations of its mesentery are simple The peculiarities of its mesentery are all acquired, and in fact the only primitive mesentery left in the adult is the mesentery of the sigmoid The liver grows rapidly and irregularly, displacing organs and appropriating large areas of peritoneum The stomach rotates and twists, assuming new forms and positions The great intestinal loop rotates and changes the original mesenterial attachments The kidneys rapidly enlarge and steal away the mesenteries of the colon ascendens et descendens Still further changes of the mesentery arise from the fact that the small bowel grows more rapidly in length than its mesentery and hence the intestine is thrown into frill like folds These changes in the *simple* primitive mesentery are manifest in fishes, as the scale of animal life ascends, the most complicated *acquired arrangements* are found in man In watching the development of the mesenteries from a simple straight fold, embracing a simple straight tube, through evolutionary stages to complications which *are almost incapable* of being unravelled, the *mechanical idea* of peritoneal development must be thrown aside The whole matter must be considered under readjustments of parts and relations Some organs appropriate peritoneum by rapid growth, while others yield a portion from shrinking Hypertrophy, atrophy and changes of position of viscera account *for peculiarities* of peritoneal arrangement in adults Remnants of embryonic life, the peritoneal recesses formed by blood vessels contained in folds of the membrane account for changes in the mesenteries

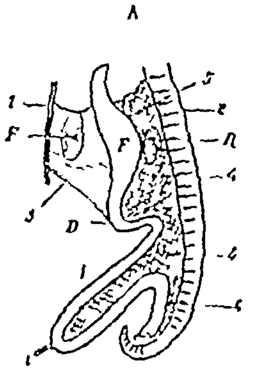

Fig 5— A' represents an early mesogastrium anterior and posterior before torsion 1 anterior abdominal wall F, liver F, stomach 3, lesser omentum D duodenum I, remnant of vitelline duct (Meckel's diverticulum) 5 mesogaster posterior 2 vertebral column 4, 4 primitive mesentery L, great intestinal loop R spleen, (after Debierre)

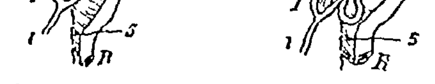

Fig 3 and 6—'B" and "C" represent progressive torsion and formation of mesenteric supports 1, *anterior mesogaster* 2, posterior mesogaster E, stomach C, colon 1, vitelline duct I small intestine V, cecum 4 mesocolon 5 mesorectum R, rectum 3, in "B" mesoduodenum, and 3, in 'A" *mesentery, (after Debierre)*

In a completely formed mesentery we have three distinctly formed layers to observe The two superficial layers consist of an epithelial membrane of a whitish pink color, glistening, moist and smooth to the touch and covering the organs out of sight with an unbroken surface The third, middle or essential part of the mesentery is the connective tissue lying between the superficial epithelial layers This is the membrana mesenterii propria It includes in its meshes veins, arteries, lymph vessels and nerves and occasionally some muscular fibers This is the essential structure which serves as scaffolding to support in the definite relations vessels and nerves It is a fibrous bed in which vessels and nerves securely lie The fibrous tissue in the mesentery surrounding the vessels and nerves is dense, strong and often sufficient in quality to bury the vessels or nerves out of sight This mesentery can be seen as early as the fourth embryonic week, in the human, with a strong lens It then stretches from the middorsal line to the straight digestive tube At this time no sign of fat is visible with the strongest lens

I have made careful examinations of the mesentery at six weeks of human embryonic life, when the digestive tube had just begun to distinctly show the bend for the great intestinal loop and the dragging of the duodenum to the right with its mesentery At this age (six weeks) with a strong lens and the mesentery in a good light, it is plain to see white strands of connective tissue forming the membrana mesenterii propria At certain points the mesentery is more transparent than at others It is made non transparent or opalescent by the accumulations of bundles of fibrous tissue The bundles of tissue do not seem to have any distinct order, but seem to follow in general parallel with nerves and vessels The change of this middle mesenteric connective tissue layer is not very manifest as fetal life advances The bundles of nerves and vessels are securely united and fixed by the membrana propria in extensive qualities As the nerves and vessels approach the gut they become more scattered and less parallel The fibrous tissue also becomes more scattered and diffuse The whole mesentery becomes thin among the arches of the mesenteric arteries In the two months' human embryo, and in the horse, I have noticed it astonishingly thin In most cases it may be noted that just as the mesentery divides to embrace the bowel, the middle mesenteric layer again increases in connective tissue This serves the useful purpose of properly distributing the small vessels and nerves on the digestive tube It also gives the bowel an opportunity to contract and expand in an elastic bed of tissue About the fourth month of human embryonic life, the membrana mesenterii propria assumes more manifest proportions The mesentery becomes thicker and stronger It assumes more of the character of adult life But the special change in the mesentery which occurs so manifestly at the fourth fetal month is the rapid increase of, not only the size of the blood vessels and nerves, but the sudden increase of the connective tissue fibers lying around them The great trunks of blood vessels lie solidly and firmly embedded in the quickly increasing bundles of fibrous tissue, while the lateral small branches pass off in less compact surroundings This connective tissue lying between the mesentery is governed very much by the blood vessels and probably nerves, for when the blood vessels become manifestly large at the fourth fetal month the tissue accumulates step by step with them This tissue is the guardian of the vessels and nerves to sustain and protect relations In later fetal life the arrangement of fibrous bundles of sub-peritoneal tissue must be wrought in the line of blood vessels A small amount of dissection will soon demonstrate that these fibrous bundles between the mesentery run parallel to blood vessels in general, and entwine and weave themselves around the channels which carry nourishment Between the trunks of vessels one can observe the membrana mesenterii propria more as a membrane, dense and strong, which holds the parts in definite relations In very spare infants of six months old or in very spare cadavers of adults, I have often dissected it and was surprised at the strength of the membrane Yet it varies in different individuals It is not so apparent in fat subjects, but in the sense of distinctly observing its wide meshes the fat subject is the best, for all fat is contained in the meshes of the membrana mesenterii propria Perhaps this membrana can be seen the most typically in the horse, with his enormous-sized mesentery It looks almost like fibers of white tendon in this animal In a spare infant cadaver, of six months, the membrane is very thin, but in that case shows its fibrous character It may be observed that by careful dissection on a spare adolescent cadaver it will be easy to note muscular fibers passing from the celiac axis and its adjacent region into the mesentery In some subjects this muscle (musculus suppensorius duodeni or, better, mesenterii) is abundant, while in others it is difficult to find it at all, especially if the cadaver be old and long dead, or injected with decolorizing agents, Again, with the increase in size of the blood vessels, the fibrous bundles in the mesentery accumulate so rapidly along the blood channels that the deficiency of the fibers in the intervening spaces becomes more apparent The view would hence arise that the membrana mesenterii propria has some directing influence over the vascular channels Even the existence of the mesentery itself depends on the ordering of the blood channels For, in certain areas in the mesentery, chiefly at the lower ilium, we may find in man and lower animals spaces almost devoid of blood vessels These areas are so thin that a slight trauma would perforate the mesentery

(To be continued)

NEPHRORRHAPHY FOR MOVABLE KIDNEY (LEFT)

Read before the Chicago Pathological Society, Jan 14, 1895

BY E F GAVIN, M D
CHICAGO

J P , 50 years old, sailor by occupation, married Family history negative Previous condition of health He had typhoid fever when 4 or 5 years old During the late war, while serving in the Navy, he was confined to his bed with rheumatism for nine months and at another time for four months No history of tuberculosis in the family He denies any syphilitic taint He had malaria at about 20 years of age

Condition before operation His present illness began about five years ago Since then he has been annoyed by chronic inflammation of the bladder He found it necessary to void his urine four or five times during the night and the act of micturition was accompanied by sensations of scalding or burning His bowels have been constipated all the time, and he has slight gastric disturbance About four years ago, slight spinal curvature began, being principally marked in the dorsal and lumbar regions He finds it necessary to use a cane to support himself on account of his deformity He has lost considerable flesh and complains of much pain of a neuralgic type, which radiates from the left lumbar region to left thigh and leg About two years ago he noticed a "lump" in his abdomen which he could move around in various directions, and which he found gave him no trouble when it was pushed up under the left ribs as he expressed it He stated that when he squeezed it a sickening pain was felt After awhile he found that a canvas belt with a large pad on the inside of it kept the "lump" up in the left lumbar region He said that occasionally this lump would slide down under the belt and being squeezed would cause him a great deal of distress For a long while he has been unable to control his bladder and has found it necessary to wear a rubber urinal

Bi manual examination revealed a movable kidney, the outline of which could be easily made out as his abdominal walls were very flaccid

An examination of his urine revealed pus and triple phosphates A search was not made for tubercle bacilli His spine was strongly curved to the right Possibly there was some ankylosis of the lower dorsal vertebræ The patient had no recollection of acute symptoms of spinal disease His skin was dry and had a dusky hue

Treatment previous to operation I recommended him to drink freely of flaxseed tea and prescribed salol and boric acid āā 5 grs , to be taken in a glassful of water (boiled) or in flaxseed tea every four hours during the daytime I taught him how to pass a soft rubber catheter No 9, and directed him to use it four times daily and told him to empty the bladder before retiring for the night

A special apparatus was secured for him, with a suitable pad attached on the left side to keep the kidney in place This failed to give him relief, *e g* , to support him as he desired, and so it was discontinued He found that his old belt worked better His bladder improved steadily and his annoyance at night almost disappeared

He urged me to operate and either remove the kidney or fasten it in its normal position, and so I made the necessary arrangements The indications were

1 To relieve annoying pain, resulting from the kidney being squeezed

2 To relieve bladder symptoms by straightening the ureter and relieving symptoms resulting from irritating urine in it and in pelvis of kidney

3 Possibly to relieve weight from bladder and pressure upon bowels

4 To possibly favor treatment of the spine

Operation March 3, 1893 Chloroform anesthesia The usual colotomy incision was made, the kidney pushed into its normal position, the capsule opened about one inch and the edges of the incised capsule sutured with silk sutures to the edges of the wound on either side, drawing the edges of the cut capsule as far outward as possible

Three long silkworm gut sutures were passed through the kidney substance and through the muscles and fascia some distance from the edges of the wound on either side and tied after inserting a twisted silkworm gut drain in the lower angle of the wound The balance of the wound was closed with silkworm gut interrupted sutures, taking care to approximate the edges of the skin incision as neatly as possible Beta naphthol was sprinkled over the line of incision and bichlorid gauze and cotton applied The patient made an excellent recovery

Subsequent treatment After the wound closed I decided to try and improve the condition of his spine I advised Sayre's suspensory apparatus which he has used faithfully with good results He is now more erect, the spinal curvature less marked and he feels better

Once a week for about two months I washed his bladder out with silver nitrate sol 2 5 per cent This improved the condition of this organ very much, as he hardly ever expressed the desire to void his urine during the night after this treatment was begun

He used the interrupted and continuous currents for some time and felt better, but electricity did not seem to assist the bladder as much as the silver nitrate sol He now has some control over the bladder and can retain a moderate amount of urine At night there is not the old inclination to void the urine, and taking everything into consideration, I feel that the operation has helped his condition a great deal

DISCUSSION

Dr D W Graham—I would not consider in this case that the spine was in any degree the cause of the movable kidney The Doctor is silent as to the pathologic condition of the spinal column whether this was what we call scoliosis or whether it was disease of the vertebræ But I do not see how the curve could be a cause of the condition of the kidney, although possibly it had something to do with it In regard to the indications for operation, I think they were very clear in this case It is in just this class of cases where anchoring the kidney to the muscles of the loin is followed by relief of symptoms and is of benefit to the patient In the large majority of cases the right kidney is the movable one I have had two cases of movable kidney on the left side , one this afternoon, and it seems to me in these two cases and the one reported tonight that the symptoms are more pronounced than when the right kidney is involved I have seen a good many cases of movable kidney on the right side, but only one in which the symptoms were as pronounced and affected the health of the patient as much as in these cases of movable left kidney We know that there are a great many cases of movable kidney, in which there is no necessity or indication for operation as far as symptoms are concerned I have in mind a number of such cases So it is not simply the presence of a movable kidney that calls for operation , it is the group of symptoms and their severity The Doctor speaks of the kidney pressing on the bladder , that may be correct , it is possible In one case where I operated the kidney was found hanging over in the pelvis, lying between the common iliac vessels However, I did not determine that to be the kidney until I had opened the abdomen through the middle line I then sewed up the wound and through an incision in the loin anchored the kidney in place We know that the symptoms of cystitis and the symptoms the Doctor has described, as due to pressure of the kidney, may occur in any of these severe cases without having the kidney press upon the bladder I am inclined to think the Doctor has drawn a wrong inference there

As to the method of operating, there are three chief ones one is simply stitching the fatty capsule to the muscles of the loin but that method is being and should be abandoned The other two methods differ a little in detail , one simply brings the kidney up against the wound and sutures it with two to four sutures through its substance to the borders of the incision The other method consists in incising the fibrous capsule for a distance of an inch or an inch and a half and suturing the incised border of the capsule to the tissues I prefer, having opened the capsule, to suture the edge of the fibrous capsule to the border of the muscle with absorbable sutures and then sew up the wound I have seen a good many use silk and silkworm gut sutures to stitch the kidney to the lumbar wall I do not understand why this is still persisted in, because in the large majority of cases this material causes trouble, it leaves sinuses, and the stitches have to be removed at some future time I am satisfied that it is not a question of the aseptic condition of the suture, because if one careful person can render silk or silkworm gut aseptic, another careful person can usually do it With the help I have, I believe I can render silk or silkworm gut as aseptic as anybody can, and yet in the majority of cases where I bury silk in the tissues it gives rise to a sinus from which these sutures have to be removed I am satisfied that the greater number of buried sutures of silk or silkworm gut require removal later I am not speaking of the peritoneum, but of other tissues

Dr Gavin—In regard to the spine producing the movable kidney, Dr Graham misunderstood me I considered the curvature of the spine as tubercular in nature, and having caused the consumption of nearly all the fat of the body a lack of support to the kidney resulted When I exposed the kidney there was very little fat about it, and I thought it extremely probable that the general wasting process favored the movable state of the kidney I did not use catgut because I had no preparation that I could rely upon as being perfectly aseptic I used buried silk sutures to connect the muscles together I did not intend to state that I brought the skin directly in contact with the capsule, but the object was to bring the edges of the cut capsule as near the surface as possible and allow it to adhere to the muscular structure The skin incision proper was closed with silkworm gut sutures, which were removed at an early date

Dr Sanger Brown—It appears to me that this is a very interesting case, but it is rather puzzling to get any satisfactory explanation of the relation between the spinal curvature and the kidney I did not quite understand from the Doctor's paper that it was demonstrated the patient had tuberculosis, and it occurred to me in trying to think of cause of the curvature, that possibly the movable condition of the kidney and the irritation set up by that might excite atrophy or wasting of the muscle and in some way unfavorably affect the nutrition of the intravertebral substance, and in that way the spinal curvature be accounted for

Dr A E Halstead—I believe the ordinary explanation of cystitis in such cases is that the hydronephrosis which is usually present in movable kidney is always infective I think that would explain all the bladder symptoms in this case When the Doctor changed the position of the kidney and straightened out the ureter, the bladder symptoms disappeared, because the hydronephrosis was drained I do not see any relation between spinal curvature and floating kidney

Dr Graham—I did not understand whether the Doctor's patient has tuberculosis of the vertebræ or any other disease of the bones

Dr Gavin, in closing the discussion, said The patient had no active disease at the time I saw him, there was no evidence of a collection of pus I thought possibly there might be a tubercular process in the bodies of the vertebræ

A CASE OF PAPULAR SYPHILIDE OF THE CONJUNCTIVA

Read before the Chicago Pathological Society, Jan 14, 1895

BY W FRANKLIN COLEMAN, M D
PROFESSOR OF OPHTHALMOLOGY, POST GRADUATE MEDICAL SCHOOL OF CHICAGO

As several of my confrères have never seen a secondary syphilitic lesion of the conjunctiva, and since, until recently, no case has come under my own observation, the disease seems sufficiently rare to demand that every instance of it be put on record

Before reporting our own case, we will take a glance at the literature of the subject, to illustrate the infrequency and the nature of syphilitic disease of the conjunctiva (especially secondary lesions) and will refer chiefly to Bull's excellent resumé in 1878, and to writings indicated under the head of "Diseases of the Conjunctiva" in the "Index Medicus" from its first issue (1879) to date

The following is taken from a paper by Charles Stedman Bull, M D, in *American Journal Medical Sciences*, October, 1878

"Syphilitic lesions of the conjunctiva, existing independently, and not connected with lesions of the eyelid on the one hand, or the eyeball on the other are not common The syphilitic lesions of the conjunctiva are eruptions, ulcerations and infiltrations Under the head of ulceration are the chancre and secondary ulcers resulting from the breaking down of infiltrated masses According to Sturgis in his report of 1,646 tabulated cases of chancre, the ulcer occurred only six times on the eyelid In some of the cases, the ulcer was purely a conjunctival lesion Demarres had in his practice two cases of chancre of the conjunctiva, one palpebral, another in the inferior cul-de-sac

Galezowski reports six patients with chancre of the conjunctiva, and Sturgis, Bumstead, Dietlen, and Bull one each

An instance of syphilitic conjunctival disease is quoted from Smee, who calls it "conjunctival blotch," and three similar cases are given from Mr French

Lawrence cites two cases of general papular eruption in which there were a few pustules on the mucous membrane of the lids

Bull says he has seen several cases of ulcerated mucous patches of the conjunctiva, and reports one He remarks that secondary lesions of the conjunctiva, those occurring during the period of constitutional infection, are much more frequent than the initial lesion

The papular syphilide at least, *if more frequent* than the chancre, is much *less often reported* Bull does not quote a single case in his very full paper, and the "Index Medicus" gives only one by title

A third variety of conjunctival lesion in constitutional syphilis is the gummy infiltration, and this is probably the least common of all

Descriptions are given of conjunctivitis gummosa in the practice of Tavignot, Magnin, Hirschberg, De Wecker, Estlander, Brière and Bull

Galezowski affirms that syphilitic affections of the conjunctiva are either chancres or mucous patches If he intends to assert that the latter are identically the same as papules, the authority of Keyes will support it

Laucereaux describes secondary lesions of the conjunctiva as small circumscribed spots, elevated, of a reddish gray or coppery color, not differing much from certain eruptions on the skin with which they may co-exist

'The 'Index Medicus' refers to some thirty papers on the primary (ulcer) and tertiary (gumma) lesions of the conjunctiva, but to only one by title on the secondary (papular) lesions, viz, Les papules syphilitiques de la conjunctive"—*Gaz Med de Paris*, 1894, 9, s i, 196–198

Bull, writing on "System of Genito-Urinary Diseases, Syphilology and Dermatology," by Morrow, 1893, divides the syphilitic diseases of the conjunctiva thus conjunctivitis, secondary lesions, mucous patches, ulcers, gummata

Loring, in a chapter contributed to Bumstead on "Venereal Diseases," 4th Ed, says "The ocular conjunctiva is very rarely the seat of syphilitic manifestations" He quotes from Savoy, (Paris, 1876), a case of syphilitic papule developed upon the ocular conjunctiva 3 m m above the cornea The patient contracted syphilis six months previously, and had a lenticular eruption on the whole body Two similar cases are given from Horteloup and Laibler

Secondary syphilis gives rise to secondary skin affections of the conjunctiva, which attend it on other parts of the body (Swanzy, "Diseases of the Eye," 1892)

In cases where the face is the seat of papular or tubercular eruptions, a corresponding condition may at times, though rarely, be observed upon the lining membrane of the lids (De Wecker) The papular syphilide appears from the third to the sixth month Unless they ulcerate, the papules leave no scars They frequently leave pigmented areas behind (Keyes)

The following notes of my case are incomplete, as the patient unexpectedly discontinued his attendance

N T, age 24, male, colored, came to my clinic at the Charity Hospital in November, 1891, on account of an inflammation of the left eye, which had somewhat annoyed him for a week, with a feeling as if something had got into his eye At the limbus of the cornea were four nodules implanted in the conjunctiva, one on the nasal side, one on the temporal, and two below and within 3 m m of each other The lateral nodules were 4 m m in diameter by 2 m m in height The lower 3 m m in diameter by 2 m m in height All circular, with a finely granular apex, and of the red color of granulation tissue The papillary reaction, the iris and the cornea were normal V =20-50 The refraction was not tested In the vicinity of the nodules there was moderate hyperemia of the conjunctiva Very little pain had been complained of Two very small ulcers (1 m m in diameter) were situated on the outer third of the anterior edge of the upper lid The pre auricular glands were not enlarged A history was given of the appearance on the face, at the age of 13, of an eruption which disappeared and left no pitting and relapsed once in about three years During July last he contracted a chancre, which was followed by swelling of the inguinal glands and a secondary papular eruption on the skin The cheeks and forehead presented a thickly covered, mixed acne like and papular eruption, arranged here and there in somewhat irregularly concentric groups Numerous depressed hyper-pigmented scars were scattered among the papules The covered parts of the body were not examined

During the second week of treatment the papules of conjunctiva diminished one half in size, and around the two lower edges of the conjunctiva a pigmented zone was first seen

The diagnosis of a secondary papular syphilide of the conjunctiva was based upon the syphilitic history of the case, the associated papular syphilide of the face, the exclusion of other lesions of the conjunctiva, and the rapid resolution of the nodules without ulceration under the mixed treatment and the application to the eye of an ointment of hydrarg ox rub grs ii, vaselin ʒj rubbed in for five minutes daily, by massage of the lids

The patient was referred to Dr Baum, Professor of Dermatology, Post-Graduate Medical School, who confirmed the diagnosis and prescribed the constitutional treatment The rapid progress toward recovery (in two weeks) probably accounts for the early vanishing of the possessor of our rare specimen

DISCUSSION

Dr C D Wescott—As Dr Coleman has said, these cases are very rare, it has never been my fortune to see one such as the Doctor has described The only syphilitic lesions of the conjunctiva I have seen are the simple chancre, of which I have seen one case, and one case of gumma It does not seem possible that there can be an error of diagnosis in this case I do not know of anything that affects the conjunctiva which would give a similar appearance, even without the confirmative syphilitic history and other lesions I congratulate the Doctor on having had an opportunity to observe such a case

Dr F W Coleman—I would say with regard to chancre that they are not so very infrequent upon the edge of the lid, and chancres upon the lids might be easily mistaken for epitheliomata I have had the misfortune to remove from the lid what I thought was an epithelioma and had a chancre turn up very near it within ten days, which was cured with iodid of potassium This case, by the way, was diagnosed by the syphilologists as an epithelioma Gumma is not so rare although it seldom manifests itself in the conjunctiva, but not so rarely in the iris and ciliary body involving the sclera and therefore appearing externally as a nodule That the Doctor does not refer to The gumma that limits itself and is situated primarily in the conjunctiva is an excessively rare disease Up to 1878 Bull makes a resumé of all the cases he has had access to and describes them fully, but does not describe a single case of papule The "Indicus Medicus" from 1879 to date only records a single case by title of papule of the conjunctiva

Dr C W Hawley—Speaking of gumma of the conjunctiva reminds me of a case I saw in a hospital in Europe, which was diagnosed gumma of the conjunctiva and was treated with mercurials very faithfully for a long time, but it did not seem to improve and finally the surgeon concluded to operate upon it When he made his incision through what he at first supposed was a gumma he removed three pieces of putty It was impossible to get any history of how the putty came there, the patient said she did not know, either she did not want to tell or did not know how it got there

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A CASE OF TACHYCARDIA COMPLICATING CHLOROFORM ANESTHESIA

Read before the Louisville Academy of Medicine, March 18, 1895

BY HENRY E TULEY, A B, M D
CLINICAL ASSISTANT TO CHAIR OF PRACTICE KENTUCKY SCHOOL OF MEDICINE VISITING PHYSICIAN TO THE MASONIC WIDOWS AND ORPHANS HOME, ETC
LOUISVILLE KY

The following is the report of a case of tachycardia, complicating chloroform anesthesia The man was a patient of Dr Mathews, and was to be operated upon for fistula He was about 30 years of age, a strong, vigorous man, and a good subject for chloroform anesthesia The following previous history was detailed after his regaining consciousness He had had repeatedly, attacks of heart trouble, a greatly accelerated heart's action being the chief symptom, with once or twice loss of consciousness during the attack He is a slave to smoking, using the strongest tobacco, uses liquor sometimes to excess and drinks strong coffee Face was florid, but heart's action normal, pulse 84, with no organic lesion He was very nervous when he got on the table, and asked that his heart be examined but said nothing of his previous history The anesthesia was begun at 3 06 P M, with chloroform, on the Esmarch inhaler, drop by drop method The exciting stage was quite severe, the chloroform was pushed and in three minutes he was relaxed, it having taken 2 5 10 drachms to bring him to the surgical degree, taking fourteen minutes in all 5 drachms were used

The operation was begun at 3 20 P M, the pulse and respiration were normal At about 3 42, after the operation was nearly completed, the chloroform mask was removed, as the pupils were well contracted and the patient fully anesthetized At 3 44 without any warning whatever, the pulse from an even regular one of about 80 or 90 suddenly began beating too fast to count, more than 200 The respirations remained unimpaired We administered 1 100 grain of nitroglycerin hypodermatically, the dressing was hastily applied and the patient put to bed While his pulse was in this condition and before he was removed from the table he raised his head and said 'Well, I'm glad I'm through with that chloroform" During the next hour 1-25 grain of nitroglycerin was administered, 1 100 grain of atropia and 1-32 of strychnia, without any effect as to lessening the rapidity of the heart beats Hot water bags were applied to feet, and over the heart Only at one time, and then for only four or five minutes, did he complain of dyspnea He was convinced of the fact that he was going to die The radial pulse all of this time, one hour, felt as if there were a constant current of blood under your finger, no pulsation was distinguishable, but the ventricular contraction was easily made out, much too rapid to count His respirations were unimpaired, breathing through his nose, skin relaxed and moist, mouth dry from the atropia and finger nails pink He was seen at 4 20 by Dr Marvin in consultation, ¼ grain of morphia was given at his suggestion hypodermatically, ice was substituted over the precordia, and in twenty minutes the pulsations could be felt, not counted at the wrist, but the ventricular contractions could be counted 160 to the minute His pulse remained in this condition until 7 P M, when it again became rapid, beating 200 to the minute A second dose of morphia, ¼ grain was given hypodermatically, and at 8 P M, his pulse was 97, and the patient sleeping quietly, having vomited some water which had been taken in the shape of crushed ice During the night he slept at intervals and the hourly pulse was as follows, beginning at 7 P M Two hundred, 97, 98, 92, 88, 80, 80, 81, 78, 78 At midnight one teaspoonful of aromatic spirits of ammonia was given

The case seems to be a unique one as well as instructive Here was a man who apparently was a good subject for anesthization and without warning the above complications arose It teaches us that the rule laid down by most authors as to the careful watching of the respiration alone is erroneous Had this man's condition not been noted, and the operation only partially completed, and had more chloroform been given, I believe he would have died Hence the practical conclusion, watch the heart always, as well as the respiration The second lesson is the danger of being too zealous in the application of restoratives, owing to anxiety as to the safety of your patient There was in all probability too much given this man

This case is entirely unique in the writer's experience, nor have I seen any such case in the literature of the subject

DISCUSSION

Dr Bailey—The subject of anesthesia is a big one As to the case reported, I would criticise it first, because Dr Tuley said the patient was a vigorous healthy man, I find these the worst cases I think his condition was peculiar and not developed by the anesthesia in the light of his present condition

There was a bad nerve force present As to the management of the case, with the rapid heart, nitroglycerin should not have been given I should rather have chosen digitalis or digitalin because of its influence on the inhibition I should have used moderate doses of morphin—should not have ventured 1-4 grain but have given 1-8 grain and waited for effects

I think constantly of the possible evils of the Hyderabad Commission, in recommending that the respiration be watched and not the pulse Notwithstanding that report, I am more anxious to watch the pulse, and I endeavor to look after both I disregard the pulse in etherization, but not in chloroform I am sure I have given chloroform in more than one thousand cases, and I am firmly convinced of that fact

Dr F C Wilson—The case reported is an interesting one and shows the necessity of careful watching To watch the pulse and respiration both, the anesthetist has his hands full He should also watch the countenance Anesthesia must be profound in operations upon the rectum, and because of that fact the danger is enhanced If the previous attacks had been known in this patient, in all probability the case would have been watched for a recurrence, but I doubt if the case could have been watched more closely, or the tachycardia noticed earlier than was done by Dr Tuley Like Dr Bailey I should not have given nitro glycerin, but think that digitalin was indicated, strychnia also, as was given, morphia and perhaps spartein, the latter given previous to the administration of the anesthetic fortifies the heart, and those cases in which I have used it have done well, the heart maintaining its strength throughout the anesthesia

Dr Bailey—I would like to state that as to complete anesthesia, it is difficult to bring anesthesia to a proper stage for divulsion of the sphincter, and there apparently is pain Lauder Brunton said that no operation should be done unless there was complete anesthesia It may be possible that the case was not fully anesthetized, and the reflex caused the tachycardia No operation should be done unless the anesthesia is complete

Dr Vance—I believe that in local anesthesia the shock is not so profound We used to see great shock from the removal of a toe nail under general anesthesia Since cocain has been introduced we see less of it the nerves are benumbed locally, and they are prevented from transmitting any shock I believe that all operations should be done under complete anesthesia The greatest accidents are when we operate under primary anesthesia Local anesthesia proves that the shock is reflex, as it is in the divulsion of the rectum

Dr W C Chapman—It has been noticed how frequently tachycardia occurs in tobacco users I never examine tobacco users that I don't find them with a pulse rate of ten to twenty above normal Tachycardia is not present at all times, and may be brought on by other causes, as a latent malaria may develop after a surgical operation, so an indigestion and excesses may cause tachycardia

Dr Dugan—I have had two fatal cases under chloroform anesthesia Neither used tobacco, for they were both ladies, both occurred within a week of each other The first one was an operation for ovariotomy, there was only one inhalation, the patient called for "a candle, a candle," being a Roman Catholic, in one breath The lips became livid, the heart's action stopped I thought that perhaps it was partially from pressure by the large tumor, and plunged my knife through the abdominal wall and relieved that by letting out the fluid, but the patient never rallied This case was on Sunday, and the following Tuesday I wished to divulse a rectum for fissure The patient was not excited, her heart was good, pulse regular She was rather inclined to be fat, but took the anesthetic like a baby When Dr Guest said she was ready, I introduced my thumbs and divulsed, there was no pain, no resistance, chloroform was withdrawn, and the patient was sponged off In half a minute, Dr Guest seemed concerned, and said the patient was not breathing well I noticed some lividity of the face She was suspended, artificial respiration performed, and at no time during the forty five minutes we worked with her did she show pulse or respiration She was healthy, a non-tobacco user, and drank little tea or coffee We can not tell when these cases will do badly The shock could not have been due to the divulsion, and Dr Guest estimated that only 30 minims had been used altogether

Dr J B Bullitt—Dr Wright, of Bowling Green, has in the last few months reported several cases of the new born asphyxiated, in whom respiratory effort was established by the introduction of the tip of the index finger in the anal orifice, producing thereby a dilatation of the sphincter There was complete asphyxiation, absolutely no respiratory effort, but immediately on dilatation of the sphincter ani, respiration was established and the infant began to cry lustily He also suggested the adoption of similar means to restore respiratory effort in unfortunate cases of anesthetization This fact would appear to throw some light on the subject in hand It is generally conceded that death from chloroform occurs primarily from respiratory failure, the heart failure being secondary It hardly seems probable that dilatation of the sphincter ani could produce respiratory effort on the one hand (asphyxia neonatorum) and yet produce a paralysis of effort on the other (chloroform narcosis) There seems to be here an incompatibility of effects It would seem probable, that what really happens is this divulsion of the sphincter before narcosis is surgically complete causes deeper respiratory effort, thereby a largely increased amount of the anesthetic is thrown suddenly into the circulation, so that the centers are overwhelmed and respiration suddenly ceases It is not the "shock" *per se*, that has done the mischief, but its respiratory effects In such a case, if the anesthetic were withdrawn and the divulsion of the sphincter ani again practiced, it would seem quite probable that respiratory effort would again be stimulated as suggested by Dr Wright

Dr Rodman—We never know when accidents will occur If deaths are more likely occur from partial anesthesia, why do they not occur without any anesthesia in minor operations? Certainly if a little pain is so dangerous, we would have many deaths where no anesthetic is given I do not believe Dr Bailey's explanation the true one I think it is best to have light anesthesia in the condition of shock I am satisfied that the danger is in proportion to the amount of chloroform vapor in the blood at any given time There have been more deaths reported in the last few years than ever before in the history of chloroform In Germany, chloroform used to be given almost exclusively, but ether is now being extensively used There have been five or six deaths in Louisville in the past eighteen months from chloroform, and there were none for five years previous that I remember It may be that the chloroform we use now is not so good, but the chemists say it is better A statement was made recently by the Professor of Therapeutics in the Johns Hopkins Hospital, that if we give chloroform to a dog once it bears it well, and will have no bad effects, but if it is given the second time it kills, but this is not so of ether

Hare, in a paper on chloroform, makes the statement that instead of lowering the head it should be thrown forward as that position opens the epiglottis Notwithstanding chloroform has been a favorite in Louisville for so many years I am an advocate of ether It can be incontestably shown that ether is safer than chloroform

Dr J N Bloom—The history of anesthesia shows ether to be the safer It is rare that death occurs in complete anesthesia Statistics will prove this

Dr Dugan—I would like to add that I saw a patient operated on by Dr Weir for a nephrectomy, die under the anesthetic, having taken it twenty one times before

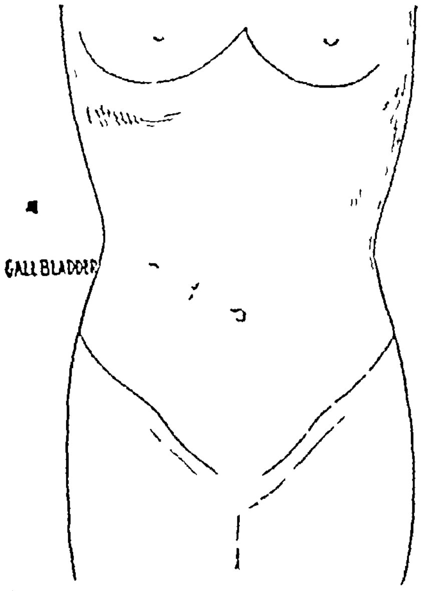
Dr Tuley—I simply want to state that nitro-glycerin was given in the case reported, because there was a good effect noticed from it in that the pulsations at the wrist could be felt after each dose Digitalin was thought of but none was at hand The divulsion was practiced without causing any impression upon the patient

THE NORMAL SITUATION OF THE GALL BLADDER IN MALES

BY JOHN B HAMILTON, M D

CHICAGO

To find the gall bladder, draw a line from the anterior superior spinous process of the ilium to the center of the xiphoid appendix Intersect this with a line from the umbilicus to the tenth costo cartilaginous junction In the right upper triangle near the apex, but nearer the right oblique line, the fundus of gall cyst will be found A needle thrust through the abdomen at the point indicated, will usually transfix the gall bladder The position of the gall bladder varies with the changes in the position of the liver, in enlargements it is pushed downward, and in some cases deflected to the right



ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER 1854–1894

BY JOSEPH JONES, M D, LL.D

NEW ORLEANS LA

(*Continued from page 520*)

CHAPTER VIII

EFFECTS OF JAUNDICE UPON THE FREQUENCY OF THE PULSE

Case 1—Malarial fever, dysentery and jaundice A F, age 32, native of Germany Entered Charity Hospital Dec 29, 1875 Had had intermittent fever Says that he has been sick with intermittent fever and dysentery for fourteen days Upon entrance presented a pale sallow, bloodless hue, and suffered from painful discharges from the bowels of mucus and blood at regular intervals On January 1, the patient showed a distinct yellow tinge of the skin and conjunctiva of the eyes, which gradually increased to the most intense jaundice in the course of ten days The urine was heavily loaded with bile, but free from albumin The pulse which had been rapid and feeble, ranging from 100 to 120 became much slower after the supervention of the jaundice The effect of the bile in the blood upon the frequency of the pulse is shown in the following table

Date	Pulse		Resp		Temp	
1875	M	E	M	E	M	E
Jan 13		70				99
14		70		72		101
15		80		36		100
16	70	80	28	32	99	101
17	100	100	21	32	101	104
18	80	92	32	32	98	102
19	70	92	21	32	99 5	103 5
20	72	80	28	[illegible]	99 5	103 5
21	80	88	20	20	98 5	103 5
22	76	84	21	21	99 5	101
23	76	72	[illegible]	21	97 5	100 5
24	72	68	28	25	99 5	100
25		80		20		99 5
26	72	72	26	40	97 5	98 5
27	72	76	40	36	99 5	99
28	60	72	36	32	98 5	100
29	72	64	32	32	99	99 5
30	60	64	28	36	99 5	100
31		68		32		99
Feb 1	68	68	40	32	99 5	99 5
2	68		32		98 5	

The periodic variations of the temperature in this case were regarded as the result of the action of the malarial poison It will be observed that in this case after the supervention of jaundice, the pulse was only 100, with a temperature of 104 degrees F, and on January 20, the pulse was only 80, with a temperature of 103 5 degrees F On the 30th the pulse was only 60, notwithstanding the continuance of the dysentery, with frequent discharges from the bowels

The treatment of this case consisted mainly in the rigid adherence to milk and rice diet and beef tea, and the employment at regular intervals of a mixture of quinin, subnitrate of Bismuth and Dover's powder, in the proportion of 3 grains each of quinin and Dover's powder, and 10 grains subnitrate of bismuth, every three, four or six hours These powders were also alternated with a simple mixture of syrup of morphia and subnitrate of bismuth, or with a mixture composed of equal parts of the tinctures of catechu, opium, camphor, capsicum and Peruvian bark, a teaspoonful in a wineglass of water every three or six hours Port wine and alcoholic stimulants in small quantities were also found to be beneficial This was a protracted and tedious case, but the patient was finally restored to health and was discharged in the month of March

Case 2—Malignant scarlet fever attended with jaundice, slow pulse, recovery Adam Grethiel, age 19, native of New Orleans Entered Charity Hospital Feb 11, 1876 February 11, deep scarlet eruption, where the eruption is not very great the skin presents a yellowish tinge Conjunctiva of eyes yellow Mucous membrane of throat and tonsils swollen and ulcerated Tongue dry and red, patient swallows with difficulty, hemorrhage from the mouth and gums, wild delirium, necessary to confine the patient to bed Has been sick about one week Abscesses are beginning to form near the elbows and at the extremities of the fingers, P M, pulse 100, respiration 48, temperature 103 5 February 12, A M, pulse 100 respiration 36, temperature 102, P M, pulse 108, respiration 28, temperature 103 Desquamation is beginning, and as the scarlet color diminishes, the deep yellow color becomes more manifest February 13, A M, pulse 100, respiration 36 temperature 100, P M, pulse 124 respiration 36, temperature 103 5 February 14, A M, pulse 88, respira tion 28, temperature 100, P M, pulse 100, respiration 32, temperature 99 The pulse continued to decline in frequency and on the 16th was 72, with a respiration of 24 and temperature 101 It would consume too much space to present the numerous details relating to the pulse, respiration and temperature in this case, the pulse, however, continued to grow slower notwithstanding the condition of the throat and the formation of abscesses and on the 19th the pulse was 68, respiration 24, temperature 101, on the 22d, pulse 64, respiration 20, temperature 100 5 The patient finally recovered entirely

Case 3 —Pneumonia, with intense jaundice, albumin and bile present in the urine, chlorids absent, frequency of the pulse diminished by the bile in the blood *John T Webb*, age 37, native of Maryland Has resided in New Orleans for eighteen months Entered Charity Hospital January 8 in a restless sleepless state and apparently suffering from alcoholism Patient states that he "had been drinking very hard before entering the hospital" The bowels were opened with the compound cathartic pill (U S P), and the nervous agitation was measurably relieved by bromid of potassium in combination with liquor ammoniæ acetates On January 10, the patient complained of pain in the right side, with cough and oppression of breathing Dullness upon percussion, with crepitation over lower and middle lobe of right lung Pulse and respiration greatly accelerated, temperature elevated January 11, evident marks of pneumonia of right lung, the conjunctiva of eyes and skin present a distinct yellow tinge January 12, jaundice well marked, high fever, pulse decreasing in frequency, falling from 130 to 112 Bile and albumin present in urine, chlorids entirely absent There is no hepatic tenderness

January 13, cougn, pneumonic sputa, headache, pain in back and limbs, no hepatic tenderness, albumin and bile in urine, chlorids absent Skin of a golden yellow color, conjunctiva of eyes yellow Patient complains of great depression of spirits and restlessness At 8 A M, pulse 100, temperature of axilla 101 14th, A M, pulse 128, respiration 32, temperature 99, P M, temperature 102 15th, P M, pulse 100, respiration 32, temperature 99 5, P M, temperature 100 5 16th A M, pulse 100, respiration 20, temperature 99 5, P M, pulse 109, respiration 32, temperature 99 17th, A M, pulse 108, respiration 28, temperature 100, P M, pulse 112, respiration 24, temperature 101 18th, A M, pulse 88, respiration 24, temperature 98 5, P M, pulse 100, respiration 32, temperature 101 19th, A M, pulse 100, respiration 28, temperature 100, P M, pulse 100, respiration 24, temperature 102 20th, A M, pulse 100, respiration 32, temperature 99 5, P M, pulse 100, respiration 28, temperature 101 21st A M, pulse 84, respiration 32, temperature 98 5, P M, pulse 88, respiration 32, temperature 101 22d, A M, pulse 80, respiration 32, temperature 98 5, P M, pulse 100, respiration 40, temperature 101 5 23d, A M, pulse 72, respiration 32, temperature 98 5, P M, pulse 92, respiration 32, temperature 101

Convalescence was tedious in this case, but the patient was discharged on the 23d In the intensity of the jaundice and in the presence of albumin in the urine this case upon a superficial examination resembled yellow fever The effect of the bile in the blood on the action of the heart will be still further evident by comparing the variations of the pulse and temperature in the three preceding cases, with the three following

Case 4 —Pneumonia of right lung, rapid pulse, rapid respiration and elevated temperature—fatal issue Thomas Gegan, age 20, native of Ireland, baker On Feb 10, 1876, went to sleep on cold ground, and on awakening suffered with severe pain in the right side Entered Charity Hospital Feb 17, 1876 He says that he has been sick with fever and severe pain in the right side for five days February 17, evening, pulse 140, respiration 48, temperature 105 5 F Some pain in right side, with cough but little expectoration, sputa contains much pus mixed with the rusty colored fibroid matter Crepitation and dullness over right lung and over lower lobe of left lung A cavity is evidently forming in the infraclavicular region of the right lung Percussion gives the cracked-pot sound, and auscultation reveals amphoric respiration The purulent matter comes from this cavity in great measure February 18, A M, pulse 140, respiration 44, temperature 105 5, P M, pulse 128, respiration 40, temperature 106 No albumin in urine, bile present, chlorids wholly absent, specific gravity 1010 19th, A M, pulse 140, respiration

ature 104 5 20th, A M, pulse 146, respiration 48, temperature 106, P M, temperature 103 5 21st, A M, pulse 140, respiration 36, temperature 105, P M, pulse 140, respiration 24, temperature 103 5 22d, A M, pulse 148, respiration 28, temperature 105, P M, pulse 144, respiration 24, temperature 104 5 23d, A M, pulse 120, respiration 28, temperature 103 5 On the 20th the patient became delirious, with occasional lucid intervals and died on the 23d

We might greatly multiply such cases, but they have been illustrated in the first volume of my "Medical and Surgical Memoirs"

Case 5 —Chronic malarial poisoning and intermittent fever, illustrating the rapid circulation in this disease J Hogan, age 29, native of New Orleans, carpenter, admitted to Charity Hospital Oct 21,,1875, has been working on Baker River, Louisiana, and has suffered with intermittent fever for two months October 23, sallow anemic complexion, presenting a dusky greenish yellow color, has fever as in chronic malarial poisoning A M, pulse 122, respiration 32, temperature 103 25, P M, temperature 102 24th, A M, pulse 128, respiration 36, temperature 103, P M, temperature 101 5 25th, A M, pulse 130, respiration 24, temperature 101 5, P M, temperature 101 26th, A M, temperature 100, P M, temperature 102 27th, A M, pulse 100 respiration 24, temperature 101 5, P M, temperature 102 On October 25 I administered to this patient, in addition to the full doses of quinin, tincture o digitalis The reduction of the frequency of the pulse was marked and rapid In this case with a temperature of 101 5, the pulse reached 130 beats per minute The urine was high colored, but contained no albumin

Case of circumscribed pneumonitic pleuritis, rapid pulse, fall of pulse after effusion into pleura and lungs George Allen, sailor, entered Charity Hospital Jan 18, 1875 January 19, pain in left side, hurried respiration, pleuritic friction sound and crepitant râles in lower and middle lobes of left lung, delirium A M, pulse 150, temperature 103 6 20th, A M, pulse 120, respiration 45, temperature 101 5 21st, A M, pulse 112, respiration 36, temperature 99 The urine was loaded with urates but contained no chlorids Albumin absent The dullness upon percussion increased, effusion has taken place and with it the temperature has fallen and the pulse has become slower

January 22 A M, pulse 72, respiration 20, temperature 97 7 23d A M, pulse 72, respiration 25, temperature 97 8 The delirium and mental aberration continued for four days and was followed by two days of sleep and drowsiness Patient recovered

It will be observed that in this case of circumscribed pleuro-pneumonia the pulse was 150, with a temperature of 103 6 degrees

Case 6 —Typhoid fever and double pneumonia, rapid pulse, high temperature, death on thirteenth day of disease Thomas Feverson, age 22, native of Norway, sailor Has been in New Orleans during the past five months, came direct from Europe Entered Charity Hospital Feb 1, 1876 At time of entrance had fever, which was wholly uninfluenced by quinin which was daily given for four or five days without any manifest effect February 4, P M, skin hot and dry, dichrotic pulse, 160 per minute, respiration 28, temperature of axilla 103 5 Dullness upon percussion over lower lobes of both lungs, with crepitant râles and rusty colored sputa Epistaxis, delirium, subsultus tendinum Tenderness in right iliac region, with some gurgling, bowels slightly tympanitic, stools not frequent but loose Passed excrement and urine in bed, sordes on teeth, tongue red and dry, not furred The tympanitis has been greatly relieved by turpentine stupes over chest and abdomen Chlorids absent from urine, high color Albumin present in small quantities in urine February 5, ninth day of disease, morning, pulse 100, respiration 24, temperature of axilla 100 February 6, tenth day of disease, morning, pulse 100, respiration 20, temperature 100, P M, pulse 112, respiration 32, temperature 104 7th, A M pulse 120, respiration 36, temperature 102, P M, pulse 130, respiration 40, temperature 106 8th, A M, pulse 120, respiration 40, temperature 103 5, P M, pulse 136, respiration 48, temperature 106 9th, A M, pulse 160, respiration 40, temperature 104 Patient died February 9, at 12 M

Autopsy twelve hours after death Thorax Heart normal, cavities contained no blood Lungs right lung did not collapse when the pleura was opened, lower lobe in second stage of pneumonic inflammation, left lung adherent to walls of chest by old pleuritic effusion Lower lobe like that of right lung, congested and solidified and in second stage of pneumonic inflammation

Abdominal cavity liver, spleen and kidneys normal Gall bladder distended with bile Peyer's patches in ileum, prominent with ulcerations, solitary glands of small intestines and especially of ileum enlarged and ulcerated White deposits in Peyer's gland and solitary glands

In a case of yellow fever, which terminated fatally in the month of November, in the ward directly opposite to the one in which the preceding case was located, the temperature on the third and fourth day of the disease reached 104, while the pulse never exceeded during this period 100 This case (Martin H King, a native of Ireland age 26) terminated fatally on the fourth day, and the post-mortem examination revealed the characteristic lesions of yellow fever, fatty yellow heart, liver and kidneys, black vomit in stomach, mucous membrane of stomach highly congested

(To be continued)

SOCIETY PROCEEDINGS

Proceedings of the First Meeting of the American Academy of Railway Surgeons

Held at the Grand Pacific Hotel, Chicago, Ill, Nov 9 and 10, 1894

(Concluded from page [illegible])

The Academy then discussed the subject of

INJURIES OF THE TENDONS IN RAILWAY ACCIDENTS

The Chairman—Inasmuch as none of the essayists are present, we will proceed to a general discussion on this subject Nothing troubles me more than injuries of the tendons I want to hear what the members have to say I expect to get some wheat and a lot of chaff as usual, but I will try and save the wheat

Dr R Harvey Reed—There is no question but what the subject of injuries of the tendons is one that is important to the railway surgeon I do not think in any of the previous meetings of railway surgeons that I have attended in this country that this question has been discussed Not a paper has been written on the subject, and yet at the same time the surgeon every now and then encounters a case of injury to the tendon that gives him more or less trouble A traumatism to a tendon is bound under ordinary circumstances to give permanent injury, and where permanent injury occurs to a person riding on a railroad it usually means damage and loss of money to the company We may have a tear of the tendon from its insertion, we may have a rupture in the body of the tendon itself These are the two most frequent injuries I have met with or that are taught in our text-books although there are other varieties, but in the treatment of injuries of tendons our text-books nearly all advise placing the arm or leg in a position in which the muscles can be relaxed, placing the tendon in the most relaxed position and keeping it there until the reparative process takes place In my experience that is absolutely impractical and I think if we rely on our success in treating cases in this way we will find ourselves defeated in our object In the first place, you can not hold any tendon of any consequence in its place by a bandage In the second place, if you bandage the tendon tight enough to come near holding it you cut off the circulation and if you do that you interfere with nature's process, and you can not have a normal reparative process We recognize this as an important matter and one which we should seriously consider When we have a simple tear of a tendon we should make it a compound injury instead of a simple one With the present advantages offered us by antiseptic and aseptic surgery, I think we are justifiable in making a simple injury of this kind a compound one It is our duty to explain to the party injured the importance of doing so and the danger of permanent injury if it is not done If we had a tear, a fracture, a solution of the continuity of the tendon in the middle part of it, we may have so much contraction as to be unable to bring the two ends of the tendon together Then what are we to do? We are taught to build a bridge of catgut between the two points and we would expect a reparative process to go on the same as in bone or sponge grafting We bring the two ends of the tendon together with catgut and therefore aid the reparative process and fill up the space with connective tissue The difficulty with this method is to get your catgut sufficiently strong so that it will bear the tension brought on it by the muscle—i e, the biceps or the gastrocnemius, as the case may be It is quite difficult to get enough catgut interlaced to hold the tendon solid without destroying so much tissue in the tendon as to impair or even prevent the reparative process and thereby induce sloughing of the ends of the tendon If you get the catgut to remain in its place you are liable to have adhesions of the sheath of the tendon, and are liable to set up thecitis, and have these adhesions extending from the sheath of the tendon to the muscles, thus impairing the activity of the tendon which we desire to obtain if possible I think the better plan is to lengthen the tendon by the ordinary methods, which you all understand, of cutting into the tendon above at this point (illustrating), and cut down near the end, turn the piece around and do the same way below, bring the two parts together, and it requires only a few short sutures to hold them in place, at the same time you lengthen the tendon Instead of building in a bridge of catgut you simply lengthen the tendon with its own substance, and the reparative process goes on satisfactorily On the other hand, if you have to suture the tendon in order to bring it together, I prefer silkworm gut to catgut or silk, as the silkworm gut is stronger and less liable to become septic, and when put in position it remains unabsorbed for a long time I have had very satisfactory results from its use It seems to me with all of these different methods—any one of which you may adopt—it is highly important that you warn the patient against the possibilities of impairment of motion in cases of this kind I recall a case I was called to treat a few months ago In attempting to lift a barrel of salt, a railway employee tore the tendon of the long head of the biceps from its insertion I made an incision in a line with the normal position of the tendon, beginning the incision just below the fibers of the deltoid and extending it downward some two inches I found the muscle contracted, and the tendon coiled up with the belly of the muscle midway between the shoulder and the elbow After fishing out the tendon I passed a strong double silkworm gut ligature through it, which I attached to a long needle I carried this needle up the groove for the tendon under the deltoid and pectoralis major fibers to its normal point of insertion where I firmly anchored it subcutaneously By this method I replaced the dislocated tendon besides anchoring it firmly at its normal point of attachment By placing the arm in a Velpeau bandage the muscle was relaxed and the result was a speedy and very satisfactory recovery, with good use of the arm

Dr R S Harnden, of Waverly, N Y—I desire to express my pleasure at hearing the remarks of Dr Reed in regard to this subject It seems to me important, simply from the fact that it has received so little attention, also because of its importance with regard to the prospective feature of damages to railway companies Some ten or twelve years since I undertook to suture tendons and, while I think at that time we were usually advised against suturing them, I undertook to go against that advice I sutured the tendon in a case to relieve the patient from deformity and I had the usual result, I suppose—a thecitis which alarmed me—and I proceeded to take out my suture and made up my mind that I would never use one again I thought I had acted unwisely in going against what I supposed was authority in the matter This subject was held in abeyance by me until the advent of aseptic treatment Since that time I have used sutures in tendons with invariably good results, and I have become satisfied that the suturing of tendons is not only feasible, but proper, whether authority in the past has recommended it or not The method of suturing tendons to overcome the natural shortening and contraction, as Dr Sayre puts it, is something original I would like to ask the Doctor if it is not a new method of suturing?

Dr Reed—Yes, it is a comparatively new method

Dr Harnden—It overcomes the natural method of shortening in a tendon I would also emphasize the use of antiseptics and experimentation in this direction, because I think this subject may still become more important and useful to us

Dr F H Caldwell, of Sanford, Florida—I do not have a great deal of this work to do, but I have sutured some tendons, and have to report in a majority of cases that I have given relief to the unfortunate ones By releasing the tendon from its surrounding adhesions I have been enabled to render the limb fairly useful, after making a resection and by suturing I have never tried the plan mentioned by Dr Reed of lengthening the tendon

Dr F H Peck of Clinton, N Y—In incised wounds of tendons it is a very simple thing to put in a buried suture, making an end-to end approximation of the tendon and getting a very nice result In the class of injuries we are called upon to treat as railway surgeons, we are liable to get a contused wound of the tendon which will cause sloughing of the bruised parts and consequent shortening and contraction, and it seems to me it is important that when the tendon is likely to slough we should excise the bruised ends and then make our lengthening of the proximal and distal fragments of the tendon by the method that Dr Reed has already mentioned

Dr L E Lemen, of Denver, Colo—I have tried the plan that has been mentioned, but in the last six or eight months, in addition to suturing after rendering the wound as aseptic as possible and removing the bruised tissues, I have been in the habit of dusting the tendon, before I sew up my incision, with stearate of zinc thereby preventing adhesion of the tendon to its sheath You will be surprised how nicely it works The stearate of zinc will remain for quite a while You apply it to the wound and then seal it over It is simply to prevent mechanical adhesions of the tendon to the sheath

Dr Reed—Do you not have to make it aseptic in order to avoid sepsis?

Dr Lemen—I render the wound antiseptic before I apply my suture and then wash it afterward I do not use it as an antiseptic, but simply to prevent mechanical adhesions It is one of the best powders for eczema or galling, or of any surface that is raw I simply use my finger and rub it all around the sutured ends of the tendon until I varnish it over, so to speak, and sew the parts together I have a great deal less trouble in having the tendon itself unite since practicing this plan

Dr Reed—I am not sufficiently familiar with the stearate of zinc to know whether it is antiseptic or not, or whether if we were to put in a wound, it will be the means of infecting the wound, or whether it would be necessary to submit it to any process by which it could be made aseptic I heard a prominent surgeon advocate making antiseptics aseptic a few days since Is this one of this kind?

Dr Lemen—In cases in which I have used stearate of zinc, I will say that I have had union by first intention

Dr C M Daniels, of Buffalo—I think Dr Reed and Dr Lemon struck the keynote of this question when they referred to antiseptic treatment Many years ago it was considered by leading surgeons almost criminal to perform subcutaneous tenotomy, but we have reached a point where we can incise tendons and suture them with a considerable degree of success

Dr Harnden—I would suggest one point in regard to the prognosis that seems to me important, as we are working for the interest of science and admittedly for the interest of the companies we represent Inasmuch as there is a prospective feature of damages always in sight, I believe it is admitted that in a resulting contracture from injury to the tendons there is the feature of damages Now in the light that has been given us by Dr Reed's description of this operation, which seems to be very valuable, can we not render the prognosis of cases of thecitis, or the result of an injury to the tendons where contracture has taken place, more favorable, thereby benefiting the company and science as well by this operation? I simply call attention to that point

Dr John E Owens of Chicago—I feel somewhat handicapped in discussing this subject, as I did not hear the paper I may say, however, that the prognosis after operations upon tendons is most favorable, not only when done at early, but at remote periods, and particularly is it the case if you can bring the two ends of the tendon together, after having prepared them for suturing I think that this can be done by certain well-formulated operations for splitting and splicing one part with a piece taken from the other It can be done by stitching the end of the divided tendon to the contiguous tendon, all of which you can do well, and I think it ought to go without saying that the prognosis after such procedures must be favorable

Take, for instance, the case which I have in hand at the present time It seems so simple that I feel like apologizing for mentioning it The wound occurred across the dorsum of the hand of a patient during my absence, and when I returned to the city it was noted that the patient could not extend the middle finger Two weeks afterward the ends of the tendons were readily united by making a longitudinal incision corresponding with the tendon, freshening the ends, bringing them together The patient now has full control over the finger If this case had been allowed to go on a considerable time without operation there certainly would have been added an element of cost which would have doubtless brought larger damages in case of a medico legal contest The time does not seem to cut a very important figure in the matter, because I have seen records of long periods after the accident where operations have been done for the purpose of uniting tendons to contiguous tendons for the purpose of restoring the loss of function In the case referred to the question comes up when I ought to remove the splint I am disposed to keep it there for six weeks, because on account of flexion I was afraid the new cicatrix might be gradually elongated and finally give way and the effect of the operation would be lost I would say that rather long continuance of the splint seems to be essential

Dr Reed—Before the discussion is closed, there is one point that it might be well for us to remember, and that is when we make a tenotomy, we will say of the tendo-Achilles for shortening of some kind as the result of some accident or disease, we all know that union takes place subsequently That is a fact which we should consider before treating a tendon by suturing We all know that where the tendo-Achilles is an inch too short, by making a tenotomy there is an inch of space to be filled up We understand that space is not filled up with tendon but with connective tissue that is built up during the reparative process by the proliferation of connective tissue cells and which unites the two ends of the tendon by this band of connective tissue We must take into consideration that where we have a fracture of the tendon, where it is possible to immobilize the part and where shortening is not too great, we can depend upon the reparative process in cases of this kind Under these circumstances, I would not advise making a compound wound of one that is simple when it can be repaired by nature in this way In my former remarks I was speaking of the class of injuries of the tendon which could not be repaired in this manner I think it is the proper thing to splice the tendon by the well known methods of recent date, whether by suturing or otherwise, as the case may be

The Committee on Constitution and By-Laws being ready to report on that part relative to the duties of the Editor, such report was made, and on motion of Dr C B Parker, Cleveland, Ohio, adopted

On motion of Dr R Harvey Reed, Columbus, Ohio, the Constitution and By-Laws were then, as amended, adopted

On motion of Dr C K Cole, Helena, Mont, the Secretary was instructed to have the Constitution and By-Laws printed and a copy sent to each Fellow of the Academy, together with a slip authorizing the Secretary to sign the Constitution and By-Laws for them

On motion of Dr C D Evans, Columbus, Neb, the Committee on Publication was authorized to secure certificates of fellowship

On motion of Dr R Harvey Reed, Dr W H Elliott, Savannah, Ga, and Dr L E Lemen, Denver, Colo, were appointed to conduct the newly elected President to the chair

Dr Cole, in accepting the Presidency of the Academy, spoke as follows Mr President and Fellows of the Academy I feel that it would be inopportune for me to attempt to make any extended remarks at this time Because first, we have no time to devote to that sort of thing, and also, because I am totally unprepared to say what would seem befitting upon this occasion I can do no more than to make my profound acknowledgments for the distinguished honor which you have voluntarily conferred upon me, and to say to you that I am not unmindful of the gravity of the duties which I shall assume in becoming the President of this organization I desire to say further, that I pledge you in the interest of railway surgery that I will give my very best efforts in behalf of the institution which we have organized upon this occasion In saying this, I am not saying any more than any gentleman has already said to himself, and whatever I may do, as well as the other officers of the Academy, will necessarily be entirely unavailing unless they are seconded by your efforts While I think we all appreciate the fact that we have taken an important step, and one fraught with grave responsibilities and important possible results, I question whether we ourselves, notwithstanding the consideration we have given this matter, fully appreciate the step we have taken and the importance of this structure which we are about to rear If the American Academy of Railway Surgeons fulfills its mission, we will have been factors in making history in this country in connection with what is destined to be one of the most important branches of medicine—railway surgery

Gentlemen, I trust you will excuse me and the embarrassment under which I labor I feel keenly my inability to properly respond and give voice to the sentiments of my heart I reiterate what I have previously said, that I will endeavor to the best of my ability to aid in advancing the objects and aims of this Academy and ask of you your indulgence and aid in furthering this plan (Applause)

The following standing committees for the ensuing year were appointed by the President

Committee of Arrangements Chairman, Dr A D Bevan, Chief Surgeon Iowa Central R'y, Chicago Ill , Dr J H Caldwell, Chief Surgeon S F & W R'y, Sanford, Fla , Dr J H Ford, Chief Surgeon, Big Four R'y Wabash, Ind

Committee on Transportation Dr W J Galbraith, Chief Surgeon Union Pacific R'y, Omaha, Neb , Dr G W Hogeboom, Chief Surgeon, A T & S F R'y, Topeka Kan , Dr A C Scott, Chief Surgeon, G C & S F R'y, Temple, Tex

After short addresses by the different officers elected, the Academy adjourned to meet in Chicago on Sept 12, 13 and 14, 1895

American Electro-Therapeutic Association

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept 25, 26, and 27, 1894

William J Herdman, M D , President

(Continued from page 522)

Dr G Betton Massey, of Philadelphia, read a paper on

THE GALVANIC CURRENT IN CATARRHAL AFFECTIONS OF THE UTERUS

The keynotes to the prevailing methods of treating pelvic disease may be said to be the following pathologic dicta That the cause of the given complaint is either 1, a narrow or constricted os, producing menstrual obstruction , 2, a bend in the neck or body of the uterus resulting in the same conditions , 3, a mechanical displacement of the uterus causing congestion, enlargement and even inflammation , 4, a laceration of the cervix or even the scar tissue resulting from it, causing enlargement of the uterus, congestion, and a host of reflex symptoms through the agency of the nervous system , 5 a salpingitis, unassociated with other conditions , or 6, a diseased ovary or ovaries, similarly unconnected with more important concurrent conditions

These six generalizations in pathology do not cover the whole field of pelvic diseases, but any one conversant with the every day practice of the average gynecologist will agree with me that they represent the conceptions formed by him in the majority of his cases Some of these conceptions are of recent origin , others date from Marion Sims and his earliest followers, and have molded practice for forty years

It is noteworthy that but one of these conceptions, that of salpingitis, has any bearing on the modern facts of bacteriology, the accepted facts of endometritis being really neglected in practice This neglect of the germ theory in the pathology of uterine disease is even more remarkable, when we consider the importance accorded the same theory in the operative precautions of surgical practice

It is my own conviction that a catarrhal affection of the uterine cavity is at the bottom of many of the complaints heretofore referred to various mechanical deviations in and about the uterus , that it is far more frequently the cause of menorrhalgia or menstrual pain than any alleged narrowing or bending of the cervical canal , that it is the prime cause of the enlargement that accompanies metritis, whether associated with laceration or not , and that it is the initial lesion in both salpingitis and oöphoritis often persisting after their appearance as a most important factor in the case Its relative importance when associated with these conditions is attested by the fact that in many instances it remains to annoy the patient after the cervix has been torn apart in one class or sewed up in another, after the pessary has been worn for years, or the tubes and ovaries have been removed from the body The day is past when we can consistently expect to cure a microbically produced proliferation of the uterine endometrium and parenchyma by stretching the cervix, by stitching it up, or by merely propping up a heavy or displaced organ , and the day is equally far past when we should expect to cure the same condition of the uterus by removing ovaries and tubes that have become affected by an upward extension of the process , yet at no time in medical history are these illogical procedures more frequently resorted to or more generally regarded as orthodox than at the present moment

The opportunities afforded by the post operative history of some of their cases has, however, had its effect on certain gynecologic surgeons who now announce their conviction that the uterus itself should be removed when operations are undertaken for diseased adnexa , and from all over the land come reports of the performance of complete amputations and extirpations of this nature This acknowledgment of their previously neglectful attitude toward the uterine seat of the catarrhal process would be more encouraging if it were not accompanied by the hopelessly pessimistic prognosis that advises amputation rather than an attempt to cure Lawson Tait is said to have graphically answered a questioner as to his treatment of chronic metritis by thrusting a red hot wire into the uterine cavity of a patient on the table , but these gentlemen prefer the knife and total destruction to even this heroic treatment

The members of this Association are thoroughly conversant with the admirable results to be gained from the use of the galvanic current within the uterine cavity in this intractable affection, yet I fear that the allied work in the treatment of true fibroid processes has cast somewhat into the shade this important additional contribution of Apostoli to our practical resources To the general profession, itself, this work is almost unknown , a fact due not only to the pathologic errors alluded to, but to a misconception of the range of the activities of milliampere currents To many physicians electricity is nothing but a nerve and muscle stimulant—actions extremely valuable, it is true, in relaxation of the uterus, but far less important than the alterations of tissue activities by which absorption and trophic regeneration may be initiated In these catarrhal hyperplasias of the uterus, electricity has a fourfold value, combining within itself probably four times the usefulness of any other remedial agency, for it is at once an antiseptic, a stimulant to absorption, a nutritive stimulant and a means of lessening uterine bulk by contracting the uterine muscular tissue

For therapeutic purposes, these cases may be divided into two classes those in which the uterus is movable by reason of the fact that the catarrhal process has not yet ascended into the Fallopian tubes , and those in which the uterus has become adherent or fixed by a metro-salpingitis or its consequences The movable class is by far the more readily cured by electrical applications Any appropriately curved electrode may be used within the cavity, skillfully inserted, for the application of the negative pole of the galvanic current though my practice of late is to more frequently employ the positive pole, necessitating a platinum electrode This latter polarity is imperative in hemorrhagic cases, and is distinctly best if any form of discharge is abundant Another reason for the use of the positive pole is its distinctly microbicidal power in doses above 50 milliampères, under the conditions of electrode surface existing in these applications As to the question of the dosage used, however, I find that in my own practice it is more often below than above the figure mentioned, 35 or 40 milliampères being often the limit

In the second class of affections, those in which the uterus, while yet retaining the initial catarrhal affection and its hyperplastic consequences, is handicapped by an extension of the chronic process upward along the tubes, with more or less adhesion between the diseased structures and neighboring surfaces, the intra uterine treatment must be extremely circumspect It is best preceded by a course of a vaginal galvanic applications by means of moist, cotton covered electrodes and strong currents with possibly the addition of calmant faradic currents The intra-uterine treatment by means of galvanic currents will nevertheless be necessary if we expect to do more than alleviate this unfortunate condition, and it is employed in its least painful form if the elastic platinum instrument is used, either bare as ordinarily employed, or covered with cotton if the cavity is patulous and sensitive In cases where the extra uterine morbid conditions are of long standing, curative results are possible, though we must often be satisfied with a more or less permanent amelioration of the symptoms With the cases of uncomplicated catarrhal hypertrophy, on the other hand, the results should always be perfect, the morbid conditions yielding slowly but surely to the directly applied alterative agency Not only may a resolution of the uterine process be thus gained, but the disappearance of swelling about the uterine end of the tubes will permit catarrhal accumulations within the

No of Case	Age	Duration of Disease	Depth of Cavity Inches	Mobility	Discharges	Condition of Uterus	Complications	Mode of Treatment	Results
1	34	15 years	3½	Fixed	Slight muco pus	Moderately hypertrophied	Left salpingitis deep laceration of cervix	— Vag followed by — intra ut 15	Cure followed by pregnancy
2	27	1 year	3¼	Movable	Hemorrhagic, leucor	Corporeal hypertrophy	Deep stellate lac of cervix	+ Intra ut flex elect 30 and vaginal galv	Improved
3	26	2 years	3	Movable	Hemorrhage, leucor	Slight enlargement	Retroversion and stenosis	+ Intra ut 25 (twice only)	Cure followed by pregnancy
4	34	3 “	3½ later 2½	Fixed	Profuse, purulent	Corporeal hyper	Mono lateral laceration	+ Intra ut 25 to 65 with flexible elect	Improved followed by pregnancy
5	21	2 “	3 to 2½	Movable	Profuse, purulent	Normal size	Severe menorrhalgia	+ and — intra ut 3 to 25 and vag galv	Cured
6	22	1 year	2½	Movable	Inconstant mucoid	Some enlargement	Severe menorrhalgia	+ Intra ut 50 to 40	Cured, followed by two pregnancies
7	38	3 years	3	Movable	Inconstant mucoid	Hypertrophied	First degree of prolapse	+ Intra ut 70 and prim farad	Cure, with improvement of prolapse
8	23	3 “	3½ lat r 2½	Movable	Constant muco pus	Hypertrophied	Tenderness in left ovarian region	—Intra ut 10 to 25 and +vag 70	Cured
9	36	9 “	3	Movable	None at pr's'nt	Moderate hyper	Menorrhalgia	+Intra ut 15 to 25 and vag galv	Cured
10	27	3 “	3	Adherent	Copious purulent	Hypertrophied with large cavity	A lacerated cervix had been repaired without relief	+Intra ut 35 and gen galv	Cured
11	28	3 “	3	Movable	Copious mucoid	Corpus 2 in in diameter, cavity large	A lacerated cervix had been repaired without relief	—Intra ut 20 to 35 and —vag	Improved
12	32	3 “	3+ lat'r 2½	Movable	Slight inconstant	Capacious cavity	Tender and enlarged ovary	+Intra ut 20 to 35 and —vag galv	Cured
13	27	4 “	3	Adherent to left	Inconstant	Moderate hyper		— Vag 60 and farad and + intra ut 20	Symptomatic cure, adhesions remain
14	25	2 “	2½	Movable	Profuse muco pus	Slight hyper	Menorrhalgia	+ Intra ut once only	Cured, followed by pregnancy
15	25	3 ‘	2½	Movable	Profuse	Slight hyper	Menorrhalgia	+ Intra ut. 20	Cured
16	37	7 “	not soun'd	Fixed	Copious purulent	Hyperplasia.	Dense masses in region of both broad ligaments	+ Vag 100 to 150	Symptomatic cure, adhesions loosened
17	22	16 mon	3¼ to 2½	Movable	Copious mucoid	Engorged	Nervous prostation	+ Intra-ut 20 to 25 and vag galv	Cured
18	31	6 years	4 to 2¾	Movable	Moderate mucoid	Hyperplasia	Evidences of old pelvic inflam	Intra ut alternatives 70 and vag galv	Cured, followed by pregnancy
19	30	9 “	3	Movable	Copious muco pus	Slight hyper		+ Intra-ut 20 and vag galv	Improved
20	21	3 “	3¼ to 2½	Movable	Mucoid	Prolapsed uterus, with hyper	Left ovary prolapsed	+ Intra ut flex elect. 25 to 40 and vag gal	Cured, ovary still lower
21	25	1½ “	3	Movable	Slight mucoid	Hyperplasia	Nervous prost	— Intra ut 20 and vag galv	Improved
22	29	7 “	3	Movable	Profuse muco pur hemorrhagic	Stenosis, cervix	Menorrhalgia	+ Intra ut 20 to 50	Cured
23	24	7 “	3	Movable	Copious mucoid		Nervous prost	+ Intra ut. 25 and vag galv	Improved
24	24	3 “	2½	Movable	Copious purulent	-		+ Intra ut flex elect 20 to 30 and vag gal	Cured, followed by pregnancy
25	22	4 “	3	Movable	Constant mucoid	Moderate hyper		+ Intra ut 20 to 35	Cured
26	26	6 “	3 3+	Adherent	Profuse offensive, muco pus	Hyperplasia	Prolapse of both ovaries and enlargement of left ovary	+ and — intra ut 20 to 30 and secondary faradic	Discharge, cured and enlargement lessened
27	26	4 “	3	Movable	Profuse muco pus		Tenderness in ovarian regions	+ Intra ut 50	Cured
28	31	3 “	3	Movable	Profuse muco pus	Hyperplasia		— Intra ut 50	Improved
29	26	4 “	2¾	Adherent	Profuse purulent		Tubes involved	— Intra ut 50 and vag galv	Cured
30	40	2 “	3 later 2½	Movable	Hemorrhage, leucor	Hyperplasia		+ Intra ut 50	Cured, followed by pregnancy
31	30	3 “	3½	Movable	Mucoid		Tenderness and thickening at left broad lig	— Intra ut 15 to 40 and neg vag	Cured
32	30	1 year	3	Fixed	Muco pus		Tenderness and thickening at both broad lig	— Intra ut 35 preceded by neg vag 50	Symptomatic cure
33	34	1 “	3 later 2½	Movable	Muco pus	Hyperplasia and prolapsed		— and + intra ut 50 to 75	Improved
34	38	5 years	3½	Slightly adherent	Muco pus	Hyperplasia and prolapsed		+ Intra ut 25 to 50 (*for two months*)	Greatly improved *Two years later hysterectomy with fatal results from supposed cancer*

latter to be drained through the uterus, several well attested instances having occurred within my own experience

Appended to this paper *will* be found *a tabulated* analysis of thirty-four unselected cases of catarrhal disease of the uterus which have been more or less under galvanic treatment The histories were consecutively *extracted records* of my private and hospital practice, and state the results attained, so far as known, together with clinical and therapeutic data

Of these thirty-four cases, *twenty-four were found to be of* the movable class, of which seventeen were cured and seven improved Ten cases belonged to the adherent variety, of which four were cured and six improved Eight of these patients are recorded to have become pregnant after the cessation of the treatment, six having been of the movable variety and two of the adherent

Dr L A W Alleman, of Brooklyn, N Y, read a paper on

ELECTRO-THERAPEUTICS OF DISEASES OF THE EYE

It is not my purpose to enter into an exhaustive consideration of all the possibilities of electro-therapeutics in the *treatment* of ocular disorders, but to invite you to discuss with me some of the more important and better established *indications for its employment*

In ophthalmic surgery, as in all other branches of medicine, the charlatan has found "electricity" a fruitful field for his endeavors "To vivify the decaying nerve, by the tamed lightning," has proved a very catching phrase and the discouraged patient receiving no promise of relief from legitimate medicine, has again and again caught at this straw only to be disappointed I doubt not that these perennial electric humbugs have done much to discourage the profession from enthusiastically investigating, and sifting out the really beneficial, from among the much that was worthless or actually harmful that has been asserted for electro therapeutics Then, too, the class of cases in which electro-therapeutics is indicated are, as a rule, chronic, and it is impossible that this, or any other *treatment, will yield* immediate and startling results, and patient and practitioner are apt to become discouraged, and abandon treatment before sufficient time has elapsed to render an appreciable improvement possible

I am, however, convinced, that used intelligently and perseveringly, we have in electro therapeutics, an agent which in certain classes of ocular disorders is of the utmost utility, and one which will yield us results which can be obtained by any other method with difficulty if at all, and I am farther convinced that the scope of its applicability will be found to broaden in the light of farther experience

There are already many conditions in which the indications are clear and the results immediate and definite Such for example, as when an annoying irritation is kept up in the eye, by the presence of lashes which either through a faulty position or direction rub against the ball When this condition extends to a part of the lid only, (partial trichiasis) electrolysis furnishes the best method of treatment at our command For this procedure, no special apparatus is required beyond that necessary in ordinary office practice

A battery of eight or ten cells, a milliampèremeter, an electrolysis needle (it is much preferable to use a stronger battery and a rheostat,) are all that is required

Platinum needles are often employed for electrolysis, but a very fine steel needle is more serviceable in destroying cilia I prefer a needle holder without a circuit breaker, it is sufficiently difficult to insert and hold a delicate needle in the hair follicle, without the unnecessary manipulation of working the circuit breaker with the fingers The circuit can be closed by a floor button by an assistant, or by the patient, who presses the anode upon the skin when directed The anode should be large and well moistened

The patient should be placed *in a reclining chair*, with the head comfortably fixed on a rest, and in a good light The whole success of the operation will depend upon reaching with the needles the bottom of the hair bulb which is to be destroyed, and if this is properly done there should *never be any* question of the permanency of the relief afforded, as these hairs are often set very obliquely This is by no means an easy task and one has to learn by experience the sensation of resistance which is experienced when the needle leaves the follicle The needle (the kathode) being well down past the bulb, the circuit is closed and a current of 3 or 4 milliampères passed until a little froth is seen to bubble up about the needle The hair is then withdrawn with an epilation forceps and should come away without the slightest resistance If it is not thoroughly loosened, the operation should be repeated, several hairs should be removed at a sitting and the treatment followed up till the lid is entirely free

The patient will experience some little pain during the passing of the current, which is not relieved by cocain, which will, however, render the insertion of the needle practically painless, but so severe is the distress occasioned by the lashes that patients never rebel at a little pain, if it will insure them permanent relief

Herpes Zoster is a condition in which galvanism has been found empirically of great utility The distressing neuralgia is relieved by it as well as the duration of the disease lessened The direction of the current does not seem to be a matter of great importance, as good results have followed its use, however employed The anode seems, however, to be preferable on the painful nerve and a current of 1½ to 2 milliamperes *for ten minutes every day* I have in this way obtained excellent results in several cases

Conjunctivitis Granularis —Among the myriad remedies which have been advocated in the treatment of granular conjunctivitis, electrolysis has found a place and justly, as it is an agent of undoubted utility

Whether there be any special indications for its use, I know not, save that it must be used in the stages preceding cicatricial contraction In the use of electrolysis, as in any other treatment of this disease, the natural history must not be lost sight of The goal to which the case is tending, and the termination which we wish to prevent is the final stage of cicatricial contraction and atrophy For this reason, any method should be deprecated which involves tissue destruction All severe applications and operations, although attended by temporary benefit must in the end be harmful, and a current which destroys the deeper conjunctival tissues is even more harmful than a knife

George Lindsay Johnson has published[1] a very valuable paper on this subject, he points out that in many cases the indifferent success which attends treatment is due to the failure of the applied remedies to remedies to penetrate to the deeper layers of the conjunctiva and suggests the use of electrolysis His method is to make scarifications in the conjunctiva, and to follow the track of the scarifier with an electrode He reports excellent results The only criticism on his work is that he uses a current of 30 milliampères I would not feel safe in using a current of anything like this strength in the conjunctiva, and it strikes me as odd that in the paper he deprecates the use of strong currents

D T Myers, of Philadelphia, has also furnished a valuable contribution to the subject of electrolysis in granular conjunctivitis and his method is preferable, in that he uses no scarification and milder currents he destroys the granulation with a needle, thus sterilizing each sac

It will require much time and patience in practice, but I have found it to work admirably in the few cases in which I have tried it The lid can be anesthetized by cocain, and when necessary Myers uses the solid salt, he advises one and one half to two milliampères, which would be entirely free from objection Many cases are amenable to treatment, by the ordinary methods, but we will now and then meet cases in practice, which are entirely unrelieved by the antiseptic and astringent applications or even expression, and for such I hope we have a new resource in electrolysis

Stricture of the Lachrymal Duct —In occlusion of the lachrymal punctum, and in strictures of the canal, the old treatment of slitting up the punctum and passing probes after dividing the stricture leaves much to be desired The punctum loses its usefulness as a capillary canal after the operation, and we too often find that the operation which was at first eminently successful, fails to afford permanent relief It is far preferable, when possible, to dilate the punctum and inject antiseptic solutions, and this procedure is greatly assisted by electrolysis Several observers have reported favorably on this treatment, and the experiments of Lagrange[2] on the antiseptic action of electrolysis do much to explain its utility The benefits are not, however, confined to the antiseptic action of the current It undoubtedly tends to reduce the swelling and hypertrophy of the mucous membrane lining the duct, and the results of the treatment are fortunately much more permanent than by the use of probes alone When the punctum is occluded, it can usually be sufficiently dilated by a conical probe, to admit a small lachrymal probe into the duct This is made the kathode, and a mild current of say 2 milliampères passed for three or four minutes, the probe which was at first tightly grasped will be now found to lie loosely in the canal, and a larger one can be introduced If this is followed up, allowing an interval of a day between treatments, and the injections used at the same time, the treatment will be much less tedious and the results much more permanent

Lagrange[3] while indorsing the use of electrolysis and reporting good results from it, gives, very wisely, a word of caution against the employment of very strong currents which would produce sloughing and subsequent cicatricial contraction I have noticed an interesting fact in this connection, viz, that the passing of a probe, made by the kathode with a mild current is much less painful than without the current which is an additional reason for the use of electrolysis One must remember not to use the anode, as much pain and reaction attends its use and the probe instead of passing easily is even more firmly grasped in the canal than before the current is applied

Keratitis —To relieve the blepharospasm, and the distressing photophobia, which does so much to make miserable the little sufferers with this disease, as well as to retard the cure, the constant current is a valuable adjunct to treatment This is mentioned in Althus, and I have found it of much utility, a current of 2 or 3 milliampères on the closed lids, anode to the eyes for five minutes at a sitting, is, I believe, the preferable method of employment

Corneal Opacities —The use directly upon the site of the opacity, with a corneal electrode and a current of from one-half to one and one half milliampères kathode to the eye is the best, and so far as I know, the only way in which old opacities of the cornea can be at all benefited, under the use of galvanism, in time, old and dense opacities can be thinned down and, if proper care is exercised, no distressing reaction need follow the application

I have presented this subject in detail to this Association at a previous meeting,[4] and I will only add that my subsequent experience has tended to increase rather than diminish my confidence in the possibilities of the treatment

Retinitis —In certain forms of retinitis much can be accomplished by employment of the constant current In retinitis diabetica, I have obtained most excellent results Not only has the central scotoma when present, diminished and the vision much improved, but the ophthalmoscopic picture has shown that the effect on the tone of the retinal vessels has been most pronounced In one case in my practice, a few years since, I had an opportunity to demonstrate this very satisfactorily The patient was suffering from retinal hemorrhage, small punctate hemorrhages were scattered in the greatest profusion in the fundus, and vision was seriously interfered with I endeavored for some time to give the patient relief by rest, the correction of ametropia and the like, but the case failed to improve I then began the use of the galvanic current, diet and medical treatment remaining unchanged She steadily improved, the hemorrhages cleared up, and the vision showed a corresponding increase After several months, she was so much better that treatment was discontinued She remained very comfortable for a year or more, when she again had a recurrence of the hemorrhages and again under treatment made a gratifying recovery In several subsequent cases, although not having so marked a result, I have been much gratified by the success attending the treatment I used a current of one to one and one half milliampères through the closed eyelids, with frequent reversals

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[1] Archives of Ophthalmology vol xix p 269

[2] Journal de Med de Bordeaux August 1893

[3] Eleventh International Medical Congress

[4] The Times and Register Nov 21 1891

Retinitis Pigmentosa—Among all the diseases which we are called upon to treat, none are more utterly discouraging than retinitis pigmentosa The subjects are, as a rule, young and the termination is pretty sure to be, sooner or later, hopeless blindness In such a condition any faint prospect of relief or retardation would be most welcome, but we are as yet, practically helpless as far as any direct treatment is concerned

It is surprising that since Dor, in 1873,[5] published reports of improvement obtained by the use of galvanism, we have had so little experience contributed to our meager fund of knowledge Gunn[6] has reported a few cases as benefited, but the most trustworthy reports thus far at our command are those of Derby[7] and Standish[8] These experienced observers made careful studies in several cases, observing all precaution against error, and report results which are wonderfully encouraging

Dr Derby also publishes a personal letter from Mr Gunn (June, 1894) in which he writes "I have followed only one case of those I then published and the improvement has been, or rather was when last seen, permanent"

Dr Derby presented two cases of retinitis pigmentosa, on which the current had been applied three times a week for three months The sittings were for five minutes, with six to eight Stohrer cells The electrodes were, as a rule, placed on the temples, but sometimes above and on the eye The results were slight visual improvement and marked increase in the size of each visual field, as shown by the charts, he also mentioned a case treated by Dr Standish, which Dr Standish reported in detail at the next meeting of the society It was of a woman 33 years of age, who had noticed a failure of vision for three years, this had increased very rapidly the three months previous to her first examination by Dr Standish, her vision was at that time reduced to 12 40 in the right and 12 50 in the left The night blindness was so great that she could no longer go safely alone on the street, at night The ophthalmoscope showed a number of characteristic star-shaped spots of pigment in the periphery of the fundus of each eye The field of vision did not extend over 20 degrees in any meridian in either eye The patient was placed under treatment by the galvanic current, and no other treatment was employed The sittings were of five minutes' duration and were, as a rule, repeated every five days The anode was placed on the closed lid, the kathode on the brow or temple, the current employed was not more than that given by four to six Stohrer cells The treatment was continued for fifteen months and the result was most surprising and gratifying There was a constant improvement in vision up to the last three months, since which the vision has remained stationary Upon one occasion, when the patient absented herself for a period of six weeks, after having been under treatment for four months, the vision and field were found to have fallen off slightly At the end of the treatment the vision was improved from 12-40 to 12 30 in the right, and from 12-50 to 12-15 in the left, the field from 20 to 75 degrees right, 70 degrees left horizontal diameters, 60 degrees right and 68 degrees left, vertical diameters These measurements were made upon a perimeter, and the greatest care was exercised to make the different examinations under uniform conditions The ophthalmoscopic changes which took place while the patient was under observation were confined to a widening out of the prolongations of each patch of pigment, so that they did not present so characteristic a picture as when first seen No new pigment patches appeared

Such results as these should stimulate us to further investigation, and should they be confirmed by good results the effort will be richly repaid

DISCUSSION

Dr Holford Walker, of Toronto, said that Dr Fuller, of Montreal, had been consulted by a physician's wife who six months previously had suffered from la grippe, followed by paralysis of the ciliary muscles About two weeks ago she had come to him with the suggestion that he should do something for her with electricity He would like to know what Dr Alleman would do in such a case

Dr Alleman replied that the constant current frequently reversed was the most likely to give good results, but the outcome in such cases was very doubtful, some of them recovering very suddenly without treatment, and others proving obstinate under what appeared to be well directed measures

Dr Beaver, of Reading, Pa, said he was very much pleased with the success the author had had with electricity in the treatment of so many diseased conditions of the eye He wished, however, to criticise the paper in one particular, i e, the importance of considering the element of time It had seemed to him that most of the papers already presented were lacking in this same particular In this last paper we had not been told how often the applications were made, how long they had been continued, or the amount of pain produced by them Just as we need to be precise in stating the doses of drugs, so should we be particular in stating the exact conditions under which we employ electrical treatment He had never found it necessary to use the very strong currents which had been recommended, either in the treatment of eye diseases or of gynecologic cases

Dr O S Phelps, of New York City—referred to an interesting case, that of a lady who had been operated upon about one year ago for cataract From partial blindness in one eye and perhaps half vision in the other, there was total blindness after the operation The lens was broken up and the cavity filled with opaque matter He would like to ask the reader of the paper whether he had had any experience with galvanism directed toward causing absorption of any such deposit?

Dr Alleman said he had tried galvanism only in incipient stages of cataract In the case reported he thought it would accomplish no purpose As to the remarks of Dr Beaver, he would say that he was entirely in accord with him regarding the importance of accurately stating the dosage and time of application, and he thought he had done so in most of the instances mentioned in the paper

Dr Cleaves said that she thought optic atrophy had not been mentioned by the author It might be interesting therefore to report such a case, which had been under her care during the last six months The atrophy was of four years' standing R V was found to be 1-200 with a correction of one dioptre, and L V 1 200 The patient could read No 12 of Jaeger's type For the first two weeks he received three applications daily of the constant current with from 1 to 5 milliampères, depending upon the tolerance, which varied from day to day The indifferent electrode which presented an area of eighteen square inches, was placed at the nape of the neck, and the active electrode over the eye The method was by changing the polarity Always following the voltaic alternations a mild application of the sinusoidal current was made, with position of electrodes unchanged During the months of August and September the treatments were not regular On Sept 22 1894, the patient was re-examined by Dr Francis Valk, who reported that there was a decided improvement in the distant vision, R V being 10 200, with a correction of two dioptres = 10 100, and L V 20 200 with correction of 1-36 = 20 50 The vision in the left eye had improved about 100 per cent, but otherwise in the examination of the field the appearance of the fundus of the eye was about the same Symptomatically, the patient was in much better condition He could now read letters, and could see objects clearly in going about the room and street, which he could not do before the treatment

The Association then adjourned at 6 P M

(*To be continued*)

Blank Applications for membership in the Association at the Journal office

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[5] A F O vol XIX p 842
[6] Ophthalmic Hospital Reports, vol X, p 161
[7] Transactions Amer Ophthal Society, 1886
[8] Transactions Amer Ophthal Society, 1887

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SATURDAY APRIL 13 1895

THE STATUE OF PROFESSOR GROSS

"For if our grief is alleviated by gazing on the pictures of departed friends in our houses, how much more pleasure is there in looking on those public representations of them which are memorials not only of their air and countenance, but of the honor and esteem with which they were regarded by their fellow citizens ' —PLINIUS EPISTOLÆ

The day before the adjournment of Congress, that body passed the following public resolution

[PUBLIC RESOLUTION—No 21]

Joint resolution granting permission for the erection of a bronze statue in Washington, District of Columbia, in honor of the late Prof Samuel D Gross, Doctor of Medicine, Doctor of Laws, Doctor of Civil Law

WHEREAS, The physicians and surgeons of the United States of America have raised a fund for the erection of a bronze statue to the memory of Samuel D Gross, Doctor of Medicine, Doctor of Laws, Doctor of Civil Law, late Professor of Surgery in the Jefferson Medical College of Philadelphia, whose labors in the cause of his profession as surgeon and as author have caused his name to be respected in the civilized world as one of the benefactors of his race, and have added luster to the entire medical profession of the United States, therefore, be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That permission be, and the same is hereby granted to the American Surgical Association and the Alumni Association of the Jefferson Medical College to erect said statue in such place in the city of Washington, District of Columbia as shall be designated by the Superintendent of Public Buildings and Grounds And the sum of fifteen hundred dollars, or so much thereof as may be necessary, is hereby appropriated out of any money in the Treasury not otherwise appropriated, for the erection of a pedestal upon which to place the said statue

Approved, March 2 1895

Great credit is due DRS W W KEEN, of Philadelphia, and C H MASTIN, of Mobile, for their successful work in securing this public honor for the late PROFESSOR GROSS who as President of the AMERICAN MEDICAL ASSOCIATION and founder of the American Surgical Association, did so much for the elevation of the standard of American Medicine Mr Adams from the Committee on the Library, in reporting the bill gave an exhaustive and appreciative review of his life, literary work and services, and concluded as follows

"The record of such a well-spent life is a valuable lesson, and in the opinion of the committee the erection of a statue to such a distinguished man in civil life will serve as an object of inspiration to the generations to come, as a monument of one of the brightest examples of skill, learning patient study, dignity and morality that ever adorned the medical profession of our country "

It is well that this statue is to be erected while the generation that knew him in the ripeness of age is still alive, for experience warns us that the duty of commemorating virtue and learning as exemplified in any person, is neglected in exact proportion to the march of time

SIR WM TURNER DECLINES

PRESIDENT DONALD MACLEAN, on behalf of the AMERICAN MEDICAL ASSOCIATION, extended an invitation to SIR WM TURNER, of Edinburgh, to attend the Baltimore meeting SIR WILLIAM would have been a welcome guest, for he is recognized in America as in Great Britain, as the greatest living anatomic philosopher His article on "Anatomy" in the Encyclopœdia Brittanica, deserves to rank among the English classics

In a pleasant response to DR MACLEAN's letter of invitation, the venerable anatomist says in part

"When your letter of February 28 reached me, I was ill in bed with a sharp attack of influenza, and for some days after its arrival I was quite unable to give it the consideration which was due to it Nothing could surpass the graciousness and cordiality of your invitation, and it did me good in my illness to think that my professional colleagues in America had been so kind and so considerate

"In many respects I have felt that I ought to accept the invitation of the AMERICAN MEDICAL ASSOCIATION, and to take a part in its proceedings There are powerful reasons to lead me to do so, the desire to meet distinguished members of my profession in America, the opportunity of seeing under such favorable auspices the beautiful city of Baltimore, and such other of your great cities as time would permit, and to visit your great educational institutions, such as the Johns Hopkins University and its distinguished President, whom I claim as a personal friend, were strong arguments in favor of my accepting this most cordial invitation "

SIR WILLIAM adds, however, that the debility following the grip compels him to decline to attend the meeting

PRESIDENT MACLEAN, in giving the foregoing information to the JOURNAL, expresses what we are sure will be the voice of the ASSOCIATION—sincere regret, not only that the invitation was declined, but on account of the illness which occasioned the declination

THE STATE SOCIETY *VS* THE TRI-STATE

Under our form of government, the States have the power that regulates manufactures, and the internal affairs of the State Neither municipal nor Federal authority may meddle with that exclusive jurisdiction

As Legislatures thus have almost supreme control over the citizens of the State, it naturally follows that all legislation which affects the profession and the direct sanitary interests of the people, must emanate from the State Legislature, and this necessitates similar organization on our part If the medical profession are to influence a Legislature, it must be done by the State medical organization, no "Tri-State" organization can accomplish anything in the State except at the expense of the different State societies, and even then they can not take the place of the State society The more the question is studied, the more clear will stand forth the principle that if our profession desires power, influence and consideration, every member of that profession owes it to himself and as well to his colleagues, that he support and maintain his local, State and National medical societies These societies should be as a holy trinity to the medical man, and the necessary support should be given as a matter of duty

These three societies surely afford an ample field for all the power, energy and ability that any medical man may possess, and in so far as the "Tri-State" societies weaken the respective State societies, they are directly harmful to the profession by loosening the ties of professional organization

A FATAL RESULT FOLLOWING A HYPODERMIC INJECTION, BEHRING'S ANTITOXIN BEING THE INJECTED REMEDY

A death has been reported at Brooklyn following a treatment of diphtheria by means of BEHRING's antitoxin The death is stated as having followed the injection in about ten minutes This lamentable result occurred in the case of a girl in her seventeenth year, in the practice of a regularly equipped physician who had already had some very satisfactory experience in the use of the serum The case was duly referred to the coroner of the county and an autopsy performed by a competent pathologist The coroner's findings were inconclusive as to the true cause of the fatal issue of the case The serum was all used upon the case, but other packages belonging to the same shipment from the same German laboratory were procured and tested

There was nothing found in this procedure that can justly be held to inculpate the antitoxin used in the case Experiments were made by the bacteriologists of the Boards of Health of New York City as well as Brooklyn, and these concur in tending to show that the serum was of sound quality, and in leaving the inference to be drawn that the hypodermatic operation itself was at fault Untoward accidents are not unknown as following that operation, and they are nearly always difficult of explanation except in a general way

The accident, in this particular case, judging from the great rapidity with which the disaster followed the injection was doubtless a lesion of some part of the circulatory apparatus, although it must be admitted as possible that the bottle of antitoxin was not correctly labeled and really contained some toxin or other substance intended only for laboratory uses Very little knowledge has yet been obtained regarding possible toxic alterations that may take place in the serum after bottling

The following is taken from the report of DR E H WILSON, of the Brooklyn Board of Health, and shows the line of experimentation followed by him to ascertain the qualities of the serum, of the same shipment as that used in the fatal case He says, in effect "I procured two bottles of BEHRING's antitoxin No 2, containing one thousand immunity units, sealed under the date January 30, operation No 159, being a portion of the same lot as used in the case of BERTHA VALENTINE Of this serum, 1 cubic centimeter was injected beneath the skin of a guinea pig weighing 420 grams, at 4 30 P M the animal suffered no inconvenience from this injection At the same time 2½ cubic centimeters of the same serum were injected directly into the ear vein of a large rabbit, this animal also suffered no inconvenience I also obtained from DR CLAYLAND, coroner's physician, about one ounce of fluid blood received in a sterilized bottle from the right auricle of the heart One half of this blood was given to the chemist of the department for chemic analysis Direct microscopic examination and cultures made from this blood showed it to be free from microorganisms Speculative theories may be advanced as to the cause of death in this case, the true cause not having yet been determined, but the above experiments conforming as nearly as possible to the actual condition, demonstrate that the cause was not inherent in the antitoxin "

DR W H PARK, of the New York Board, also experimented with two vials of the same importation of "operation No 159" and his report states "I have submitted both vials to thorough tests at the bacteriologic laboratory of the Board of Health, by injecting excessive doses into guinea pigs and rabbits without producing in the animals any deleterious effects whatever Specimens from both vials were also submitted to bacteriologic tests and were found to be absolutely free from living germs of any kind

"These results, taken together with the fact that the New York City Board of Health has employed this same make of antitoxin in a considerable number of cases with only the best of results, leads me to express the opinion that the unfortunate results which followed its administration in the case referred to can not be attributed in any way to the antitoxin which was employed "

There have already been many hundreds, if not thousands, of injections made in this country of the imported serum, and this is the first accident of the nature described that has been publicly reported On the other side of the ocean the number of serum treatments has been vastly greater, with only a very small proportion of untoward results referable to the remedy and not to the operation

BUFFALO MEDICAL AND SURGICAL JOURNAL

After a half century of good work in the cause of medical literature, and for the welfare of mankind, the *Buffalo Medical and Surgical Journal* proposes to signalize its semi centennial anniversary by increasing its reading pages from sixty-four to eighty, and by making other improvements

The editors will please accept the congratulations of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, on the youthful vigor which still characterizes our Buffalo contemporary despite the fifty winters that have passed away since it was founded We hope that our contemporary may still be young and as active, when it celebrates its centenary

PROGRAMS OF THE SECTIONS

In order to prevent delay in the preparation of the program, Section officers are earnestly requested to

AFTER THE FIRE

WE print herewith an illustration showing the appearance of the hallway at the entrance to the office of the JOURNAL, from which the members of the ASSOCIATION will see our narrow escape from a disastrous conflagration It is a source of gratification that the Saturday issue of the JOURNAL was not only on time, but had the standard number of twenty-eight pages of reading matter This is the smallest number issued since July, 1893, but it is the same size as most of the other weekly journals in the United States and the size adopted for the four years previous to 1893

The hallway entrance to the JOURNAL office, after the fire
[From a photograph]

We can not commend too highly the prompt and efficient service of the Fire Insurance Patrol of Chicago Every night since the fire, while the roof has been open and exposed to the rain, the Patrol has promptly appeared and covered up every article in the office with waterproof tarpaulin To this care and vigilance may be ascribed a large part of the saving that was effected

Do not forget the JOURNAL SPECIAL TRAIN leaving Chicago Sunday, May 5, from Pennsylvania depot, 3 15 P M Write for space desired

CORRESPONDENCE

The Case Against the Code

SAN JOSE, CAL, April 3, 1895

To the Editor —I have just received a copy of a circular issued by the Philadelphia County Medical Society under date of March 11, 1895, desiring action by our county and State societies in relation to the character of advertisements that shall appear in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION This circular states among other things the following

1 "The Code of Ethics—the moral and organic law of the AMERICAN MEDICAL ASSOCIATION—as is well known, not only prohibits physicians from employing secret nostrums, but declares that 'in any way to promote the use of such nostrums is reprehensible'

2 "The advertising of such nostrums in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, which is taking place, is certainly an attempt to promote their use The ASSOCIATION appears, therefore, at least tacitly to permit the Editor and Trustees of its official JOURNAL to transgress, in the conduct of the JOURNAL, the law laid down for our guidance as physicians"

It may be recollected that the present writer had something to say a year ago and more, in the JOURNAL, on the question of the revision of the Code of Ethics I pointed out then some of the glaring inconsistencies as between some of the declarations of the Code and the practices of most members of the profession I urged the importance of revising the Code that our professions and practice might be in harmony But the majority at the San Francisco meeting thought that the old creeds had better stand, while we would go on belying them every day

This Philadelphia County Medical Society assumes an air of immaculateness, innocence and virtue that is refreshing in these days of moral degeneracy and humbuggery They say the JOURNAL OF THE ASSOCIATION must be immaculate like themselves, and stand on the very orthodox letter of the Code! There must not be the least shadow of a doubt about every medicine and thing advertised in the JOURNAL as being warranted by "The Patent Regulator," the Code Their chief refrain seems to be in relation to proprietary medicines, forgetting at the same time that the Code also declares that no member of the ASSOCIATION shall patent a surgical instrument or appliance, and inferentially "that he must not use a patented instrument or encourage the use of the same" *"Consistency, thou art a rare jewel!"* What about the patent vibrometers, nebulizers, uterine supporters, artificial limbs, surgical chairs, and multitudinous other instruments advertised in the columns of the JOURNAL from time to time? Should the JOURNAL aid the use of patented instruments any more than proprietary medicines? Philadelphia County Society, stand up and answer!

The Philadelphia County Society may be composed entirely of members who are nothing but the *true blue, Code of Ethics* type of medical gentlemen, but if we can judge of that society by what we know of others, and at such long range, I would seriously question whether their practice corresponds with their preaching In the first place, how many members of that society use proprietary medicines constantly in their practice? Yea, how many, even, have used antikamnia? How many members of that code-bound society use patented surgical instruments or appliances in their practice? Is it a sin to patent a surgical instrument, but not a sin to use one? Would the members of this society allow a patient to die before they would use a patented surgical instrument, and thus violate the Code? If not, why not?

This society says that a certain class of advertisements that are admitted to the columns of other supposedly respectable medical journals must not be published in the columns of our JOURNAL, as being inconsistent, and contradictory to the Code

Let us put these gentlemen on the witness stand again Do the members of the Philadelphia County Medical Society take any other journals than the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION? If so, do not all these journals contain in their advertising columns just the very class of advertisements that they declare shall not be published in our JOURNAL? Why do they take journals which aid and abet the use of secret nostrums or proprietary medicines? In doing so, are they not likewise aiding the use of said remedies?

As I said, in the first place "Consistency is a rare jewel" If we are guided by an injunction which is much older than the Code of Ethics of our ASSOCIATION, and which reads, "Let him that is without guilt cast the first stone," I wonder how many stones will be thrown? I wonder if the members of the Philadelphia County Medical Society would make the air fairly black with missiles? Our own Augean stables must be cleaned before we insist on a general cleaning up all round We must "get the beam out of our own eyes"

The only way to have consistency between the Code and the practice of the profession, in regard to patent things in general, is to remove the clause referring to the same from the Code We know that we are professing one thing and practicing another now, why should the inconsistency continue? Yours truly,

A C SIMONTON, M D

Of What Use is the Pharmacopœia?

FORT WAYNE, IND

To the Editor —I do not wish to disparage the United States Pharmacopœia in the least, nor to detract from the great merit of a work involving so much conscientious care and science and labor on the part of its authors, but I think I voice the feeling of the profession generally when I ask the question written above

In England, the College of Physicians has a legal right to inspect apothecaries' shops, and therefore to determine to some extent the nature of their contents In Germany, Italy, and some other European countries the civil authorities have control over pharmacies, and can fine the proprietors if a specified list of drugs of a specified quality be not kept in stock But in the United States there is no legal control of pharmacy, except in regard to pharmacists' qualifications, and there is no pretense on the part of physicians to regulate the range of their remedies by the Pharmacopœia A few druggists are still found who make their salts and tinctures as this authority prescribes, for most drugs and preparations are purchased from reputable wholesale dealers, and from manufacturers whose pharmaceutic laboratories are on a scale calculated to inspire confidence in the purchaser regarding the purity and standard strength of drugs sold Hosts of small makers, too, compete for the patronage of the physicians, with a pill or tablet or elixir, and the German color makers supply most of the newer and rarer chemicals

Under these circumstances, the Pharmacopœia seems to be out of gear with the times, and is to be looked on as a kind of survival from the past, like the great auk and the woolly rhinoceros Yet it is quite possible that there is still a place for a United States Pharmacopœia, provided that the book can be made to suit the conditions of these days Until then, it is only an expensive luxury, and an unnecessary imitation of works that—under the different laws of European countries—may have some good right of existence What number of American physicians use the Pharmacopœia in their practice or have it in their libraries? What drugstore confines itself to the Pharmacopœia, or cares for it as an authority? What medical college uses the Pharmacopœia as a text book for teaching materia medica? It was said once that the work "has got away from the medical profession," but I think it is the profession—including pharmacy—that has emancipated itself from the Pharmacopœia

In America, our chief use of such a work would be to fix or standardize the nomenclature of drugs A second use would be to offer a list of drugs that are therapeutically efficient, distinguished from drugs that are valueless or inert, and from new remedies that have not been sufficiently tested A third use would be to reinforce the decimal system of weights and measures in medical usage, and, to accomplish this, a new weight, the decimilligramme, should be added, and the system must be made to conform better to the *teaspoonful*, until the domestic and convenient measure can be eliminated

More regard must be paid to the convenience of prescribers, the confusion between waters, liquors, and solutions, syrups, elixirs and glyceroles, tinctures, wines and spirits, and so on, should be abolished A more extensive list of remedies with posologic and therapeutic tables might be added The list of preparations should be as brief as possible—especially of compound mixtures and syrups, and powdered extracts tablets and troches should be recognized We should regret to give up the Pharmacopœia, we should be glad to see it radically recast, but, in its present form, we are justified in asking Of what use is the U S Pharmacopœia? W P WILEY, M D

Leprosy Case—Where It should be Reported

NEW YORK, March 31, 1895

To the Editor —I beg to state, with reference to one of your remarks in the Public Health columns, of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, March 30, as to my not reporting a certain case of leprosy directly to the local Board of Health that I take, in such affairs, a higher ground According to my opinion, such cases should be reported to a United States Health Officer, and the State or City Board of Health should have nothing to do with them The State Board of Health would think only of the protection of its own citizens, and would most probably do everything possible to shift the responsibility, that is the expense of the maintenance of the leprous family on some relations or friends of the leper, living perhaps in another State If the danger was averted from their own vicinity, their particularistic conscience would be perfectly satisfied

A city board would rather shut its eyes and ears to the proclamation or avowal of existing leper cases, than to undergo all the evils resulting from the reception of such a communication Think of the New York Chinese lepers who had to be shipped back and forth, to and from Vancouver, in box cars (like cattle), and then to be exposed miserably on the extremity of North Brothers Island, until death separated them still more from human charity, as they had been separated from it before These things must be trying for any human being whose power and authority decrees them, and we have no reason to believe that the members of our Board of Health have harder hearts than the rest of us

If these cases were reported to the United States Public Service, the Federal Government would have to protect every State equally, and the United States ships could return the lepers to the place where they came from, without those vain and expensive endeavors to get rid of them by way of Vancouver, whence, as the British steamers declined to receive them, they had to be brought back

I may add here, that I mentioned this beginning of a leprous condition after the puncture of a fish bone, to Professor Putnam He said that while he was helping Agassiz in his investigations on fish, the assistants very often received poisonous wounds, but that these poisonous wounds were always painful It must be remembered that the wounded place in our leper was anesthetic Professor Putnam is of opinion that the poisonous element in fish resides in the mucus, for when the bones had been washed with alcohol, or simply dried, no puncture had any poisonous effect

I must say that it seems to me quite probable that the leper whom I have seen here, had already when he came in contact with that fish, at least the beginning of leprous anesthesia

Dr Bristow, of Brooklyn, asked me how I could explain the fact that in my case the tuberculation appeared first on the face, while the inoculation had begun in the finger I answered that the tuberculation occurring in the face and outer sides of the forearms, and on the back of fingers is supposed by Unna to be due to selection by the bacilli, they established themselves in those regions where the least motion is felt The occurrence of tuberculation in the exposed parts of the body is the strongest argument for the theory of host-inoculation Yours truly,

ALBERT S ASHMEAD, M D

The Warren Formula

ROSLINDALE, MASS, March 29, 1895

To the Editor —Will you kindly give me the name of the writer of the answer to "Injections in Hernia," printed on page 418, March 16 issue of the JOURNAL? I want to learn the page in Heaton on the "Cure of Rupture" where that formula occurs As a fact the formula is copied from page 65 of "A Plea for the Cure of Rupture," by Jos H Warren, A M, M D, LL D You will find other formulæ on page 57 Heaton used only oak bark, pure and simple The formula that you print was first used by my father, Dr Warren, and was an improvement on Heaton's crude method Heaton's book was published in 1877 My father's books were dated 1880 and 1884, and were considered authoritative

I fail to see how such a flagrant mis statement as crediting the formula to Heaton could possibly have occurred, and I trust a correction will be made at an early date

Yours respectfully, CHAS EVERETT WARREN, M.D

ANSWER —The prescription mentioned was quoted from Marcy ("The Anatomy and Surgical Treatment of Hernia," New York, 1892, p 275) He says "Dr Warren began operating upon hernia by the Heaton method soon after the author's death He stated in a note to his second edition, that he is 'convinced the credit of the origination of the method belongs to Dr Pancoast, that to Dr Heaton is due the discovery of the exceptional value of the thick extract of the oak bark ' He greatly modified and improved the instruments to be used both needles and syringe, and changed somewhat the medicamenta employed Among the recipes commended the following is preferred "—Then follows the prescription given in our issue of March 16, 1895 It is due to Warren to say that Heaton used the fluid extract of white oak bark alone The alcohol, ether, morphia and tincture veratri viridis were added by Warren In our answer to our Alabama correspondent we gave the formula without the slightest intention to detract from whatever of merit was contained in the additions mentioned, or the twisted needle of the Warren syringe Only a part of the editor's library is in Chicago, and in the transfer of a working collection, both Heaton's book by Davenport, and Warren's book were left in his Washington library

Diphtheria Epidemic at Akron—Use of Antitoxin

CLEVELAND, OHIO, April 1, 1895

To the Editor —Permit me to submit for the columns of Public Health in the JOURNAL the following item

An outbreak of diphtheria has recently occurred in the Summit County Children's Home at Akron, Ohio Dr L S Ebright, physician in charge of the Home, and Health Officer of Akron, diagnosed and isolated the first case March 21 This boy recovered after a severe illness of a week's duration March 27 another boy was taken sick, and the next day the disease appeared in three girls The Home contains sixty children varying in age from 2 years to 15 years, and fifteen attendants March 30, after making a preliminary bacteriologic examination of one of the cases, I went to the Home with Dr Ebright and administered the antitoxin obtained from our (Wooster Medical College) diphtheria-immune horse The boy who had been sick three days was dying of a profound toxemia, and lived but six hours after my visit Therapeutic injections of antitoxin were given to the three sick girls at my first visit, also to a new case brought into the hospital March 31 Aside from these therapeutic injections, immunizing injections of the antitoxin were given to *all the children* and *all the attendants* in the Home (seventy in all)

Bacteriologic examinations showed diphtheria bacilli in all of the sick children The four patients who received the therapeutic doses are doing splendidly Fever and pulse much reduced and *membrane all gone* in all these cases forty-eight hours after the first injection No new cases have developed in the last two days among the immunized individuals Thus far we have been unable to trace the cause of this outbreak, which is entirely confined to the inmates of this institution There seems but little doubt that the prompt and *liberal* use of antitoxin has saved the Home from a devastating epidemic of diphtheria Very truly yours,

A P OHLMACHER, M D

No Smallpox at Little Rock

LITTLE ROCK ARK, April 1, 1895

To the Editor —In the issue of the JOURNAL for March 23, page 454, under the heading 'Health Reports," it is stated that from February 1 to March 8, eighty-two cases of small pox and fourteen deaths have occurred at *Little Rock!* The report was sent out from the latter place and the error doubtless occurred from that fact, while Hot Springs is the place where the disease has existed and the figures refer thereto There is no smallpox in Little Rock, but we have the Legislature Very respectfully, L P GIBSON, M D

Cold in the Treatment of Pneumonia

1829 SPRUCE STREET, PHILADELPHIA, PA

To the Members of the Medical Profession —My last paper on "Ice-cold Applications in Acute Pneumonia" gives a record of seventy-four cases so treated, and only two deaths

Being desirous of making a full collective report on this subject, I take the liberty of asking those who have tried this measure to kindly give me the result of their experience with it Full credit will be given to each correspondent in the report which I hope to publish

THOMAS J MAYS, M D

The Forty-sixth Annual Session of the AMERICAN MEDICAL ASSOCIATION will be held in Baltimore, Md, on Tuesday, Wednesday, Thursday and Friday, May 7, 8, 9 and 10, commencing on Tuesday, at 10 A M

Infantile Scorbutus

BOSTON, MASS, March 11, 1895

To the Editor —In a recent number of your JOURNAL there is a report of a case of infantile scorbutus in which the infant was nursed until three months old, then fed on Condensed Milk and Mellin's Food upon which she seemed to thrive till she was about a year old when certain pathologic symptoms were observed One of the five doctors under whose observation she now passed, made an attempt to change her diet to cow's milk but its use was abandoned as it caused nausea and constipation When sixteen months old she was first seen in consultation by the writer of the article, and the diagnosis of infantile scorbutus was made at this time the diet was changed by him to fresh cow's milk, with no record of digestive trouble

He says The child was put on fresh milk and a rational diet suited to her age The attending physician gave a little lime water and cod liver oil for the rachitis Later when she came under my immediate care, Thompson's Solution was given for the same purpose She steadily improved and would now make a splendid picture for an advertisement setting forth the fact that proprietary foods are always useless and frequently dangerous "

The sweeping statement in the last sentence of the above quotation is not borne out by the record of the case The writer says earlier in the article that proprietary foods mixed with water or condensed milk are the most common causes of this disease Condensed milk alone and fresh milk unduly diluted have also produced some cases " He superseded the Condensed Milk and Mellin's Food with fresh cow's milk but he entirely ignores, in his summary, the effect of the Condensed Milk, which elsewhere in his article he says will cause scorbutus, and casts the blame wholly on the proprietary (Mellin's) Food, which he nowhere shows to have been the cause of it It should be further observed that the Condensed Milk, of itself an inadequate food, was unduly diluted " half a fluid ounce being mixed with eight fluid ounces of water This half a fluid ounce of Condensed Milk must represent but a small amount of milk, and probably not the total constituents of that small amount Condensed Milk being usually deficient in fat, and moreover Condensed Milk is not fresh milk

It was not the Mellin's Food it was the lack of fresh milk that caused the disease

We quote from those eminent authors, Dr Cheadle and Dr Barlow, to prove that Mellin s Food was not the cause, these authorities the writer of the article also has quoted

Dr Cheadle states his conclusions in reference to infantile scorbutus as follows in his work entitled "Artificial Feeding and Food Disorders of Infants," third edition, page 216 ' In no instance have I seen the disease arise in an infant at the breast, or when fed on an ample supply of good cow's milk Oatmeal and water bread and water, various patent farinaceous and desiccated foods, peptonized condensed milk, sterilized milk pancreatized farinaceous food and milk, German sausage bread and butter and tea beef tea, gravy and bread, in most cases with no fresh milk at all, in a few with a very small amount only, are the dietaries on which I have seen scurvy develop, and latterly most often on the peptonized and pancreatized foods now so much in vogue "

Dr Barlow, in the Bradshaw Lecture on Infantile Scurvy (the London *Lancet* Nov 10 1894) says ' Let us turn to the question of food In the group which I have described, in no single case at the time of onset of the malady has the child been breast fed In the great majority, where complete details have been obtained these infants are found to have been nourished on what may be called preserved foods ' In the front rank come the various proprietary infant foods, prepared by the addition of water to certain powders Then come the different forms of condensed milk, and the proprietary goods made with condensed milk Then come cases in which, either accompanied by proprietary food or not fresh milk has been given, but with extreme dilution, during the later stages of infancy "

These quotations from these eminent authors fully sustain our position

The Liebig formula is a formula for the extemporaneous modification of fresh cow's milk Liebig utterly condemned the use of farinaceous foods and Condensed Milk Mellin s Food, a true Liebig food is not a dried milk food it is not a patent farinaceous or desiccated food it is not a peptonized or Condensed Milk it is not pancreatized *it is* a preparation for the *modification of fresh cow's milk* Our advertisement which has been running in your JOURNAL and other medical journals for some time brings this prominently to notice We have been compelled thus to emphasize this point on account of the great efforts that have been made to promote the use of Condensed Milk as an infant food And we assert and our assertion is borne out by facts that infantile scorbutus even now comparatively rare " has only been observed to any degree where condensed and desiccated milk and milk foods and other forms of devitalized milk have been substituted for fresh cow's milk The directions require the use of fresh cow's milk with Mellin's Food, only as a temporary expedient in case fresh cow s milk is not obtainable should the use of Condensed Milk ever be permitted

In further confirmation of our position we quote from the report of a case of infantile scorbutus, by Prof William C Hollopeter in the *Medical Bulletin*, of Philadelphia The duration of the disease was one year, and this long period was consumed by reason of the irritable condition of the gastro intestinal tract The slightest change in the diet would provoke a sharp attack of diarrhea I placed the child on freshly filtered milk, cream, and boiled water equal parts which she failed to digest I then began with freshly peptonized milk which did well for a short time Finally I was compelled to resort to equal parts of filtered milk, cream and boiled water, with the addition of two teaspoonfuls of Mellin's Food to each bottle This seemed to meet the necessities of the case exactly Meat juice ʒj (4 gm) t i d and a salt bath every day were also ordered Medicinally I prescribed 2 grains (12 gm) of the ammoniated citrate of iron in freshly expressed orange juice This was also too irritating to the bowels, but after reducing the dose so that he might receive 1 grain of the iron and a half drachm of the orange juice twice a day, a marvellously rapid improvement was seen, which soon terminated in complete recovery "

Dr Cheadle says that fresh milk possesses, in addition to the other essential elements a mysterious antiscorbutic element Fresh milk, of necessity, is the antiscorbutic food of infancy Imperative as its use is Professor Hollopeter was unable to employ it in the case under his charge until he added Mellin's Food to the fresh milk, when all difficulty ceased

Mellin s Food, prepared with fresh cow's milk contains the antiscorbutic element, and it will not produce scorbutus, but on the contrary will prevent it Respectfully yours,

DOLIBER GOODALE CO

ASSOCIATION NEWS

Secretary's Notice —The Certificate System

PHILADELPHIA, March 28, 1895

Each person when purchasing a ticket to Baltimore must pay full fare, taking receipt of the agent at the time, this signed by the Permanent Secretary at the meeting enables the purchaser to buy a return ticket for one third fare These certificates are not transferable, and should one be offered by any one not entitled to it, the ASSOCIATION will be required to pay the penalty These are good but three days after the adjournment of the ASSOCIATION The sale does not begin until three days before the meeting Special arrangement has been made for the American Academy of Medicine, so that its members can obtain tickets early enough to attend its sessions, which begin May 4

The following railroads have given excursion rates Alabama Great Southern, Alabama Midland, Atlantic Coast Line, Atlanta & Florida, Atlanta & West Point, Brunswick & Western, Charleston & Savannah, Central Railway of Georgia Cincinnati, New Orleans & Texas Pacific, East Tennessee, Virginia & Georgia, Georgia, Georgia Pacific, Georgia Southern & Florida, Jacksonville, St Augustine & Indian River, Knoxville Cumberland Gap & Louisville, L & N, Marietta & Northern Georgia, Memphis & Charleston, Morristown & Cumberland Gap, Nashville, Chattanooga & St Louis, Pennsylvania, Port Royal & Augusta, Richmond, Fredericksburg & Potomac, Savannah, Florida & Western, South Carolina, Southern Railway and Western Atlantic

Now we have all roads including those under the Western Trunk Line Passenger Committee The New York & Boston Lines Passenger Committee have just agreed to a fare and a third This includes Boston & Albany, New York & New England, New York, New Haven & Hartford, Old Colony, Fall River, Norwich, Providence, Stonington The Boston Passenger Committee adds to these Boston & Maine, Central Vermont, Concord & Montreal, Fitchburg Maine Central, Portland & Rochester

The Trunk Line Association, includes the Grand Trunk Railway, New York, Connecticut & Hudson River, West Shore, N Y O & W, N Y L E & W, Del, Lackawanna & Western, Lehigh Valley, Central of New Jersey, Philadelphia & Reading, Pennsylvania, Baltimore & Ohio, Chesapeake & Ohio W B ATKINSON, Secretary

Section on Neurology and Medical Jurisprudence —Daniel R Brower M D, Chicago Chairman, T D Crothers, M D, Hartford, Conn, *Secretary*

HYPNOTISM

1 Hypnotism, its Uses and Uncontrolled Abuses, by William Lee Howard, Baltimore, Md

2 Medico-Legal Studies of Hypnotism, by Charles K Mills, Philadelphia, Pa

3 Medico Legal Relations of Hypnotism, by Hon Clark Bell, New York City

4 Duplex Personality and its Relations to Hypnotism and Lucidity, by R Osgood Mason New York City

5 Difficulties in Eliminating Fraud from Hypnotic Phenomena by Charles W Burr, *Philadelphia*, Pa

6 Hypnotism in General Practice, by J S Eskridge, Denver, Colo

7 Therapeutics of Hypnotism, by S Allison Hodges, Richmond, Va

8 Hypnotism in the Management of Inebriety, by T D Crothers, Hartford, Conn

9 The Psycho Physics of Sleep, by W Xavier Sudduth, Minneapolis, Minn

10 Hysterical Amaurosis and Pseudo Meningitis, with Report of a Case Treated by Hypnotism, by Hugh T Patrick, Chicago, Ill

ELECTRICITY

11 Observations on some Characteristics and Relations of the Dynamic and Static Forms of Electricity, by A D Rockwell, New York City

12 Treatment of Esophageal Stricture by Electrolysis, by W S Watson, Fishkill on the Hudson, N Y

13 Sinusoidal Electrical Current and its Practical Uses, by J H Kellogg, *Battle Creek*, Mich

14 Electro Therapeutic Technique in the Treatment of Neurasthenia and Nervous Prostration, by G Betton Massey, Philadelphia, Pa

15 Electricity in the Treatment of Ocular Neuralgia, by Horace M Starkey, Chicago, Ill

16 Electricity in the Treatment of Exophthalmic Goitre, by Robert Newman, New York City

17 Electric Light Bath, its Uses in the Treatment of Diseases, by J H Kellogg Battle Creek, Mich

18 Electricity *in the Treatment* of Chronic Neuritis, by James C Gill, *Chicago*, Ill

EPILEPSY

19 On the Relation of Sex to the Prognosis of Epilepsy, by William Browning, Brooklyn, N Y

20 The Medical and Surgical Treatment of Children before the Epileptic Habit is Fixed, by E D Ferguson, Troy, N Y

21 Therapeutics of Epilepsy, by Horatio C Wood, Philadelphia, Pa

22 Practical Treatment of Epilepsy, by Frederick Peterson, New York City

23 The Value of Craniotomy in Epilepsy and Imbecility, by Charles L Dana, New York City

24 The Technique of Craniectomy *for Epilepsy and Imbecility*, with exhibition of New Instruments, by Seneca D Powell, New York City

25 Reflex Causes of Epilepsy, by Wharton Sinkler, *Philadelphia, Pa*

26 Epileptoid Attacks of Reflex Crises Curable by Surgery, by Robert S Morris, New York City

27 Supplementary Treatment of Epilepsy, by A N Williamson, New London, Conn

28 Relations of Food to Epilepsy, by Edward M Schaeffer, Baltimore Md

29 The Limitations of Surgical Operations as a Means of Relief in the Cure of Epilepsy, by Thomas H Manley, New York City

30 Some Non Medicinal Suggestions for the Treatment of Epilepsy *by Samuel J Fort, Ellicott City*, Md

31 A Remarkable Case of Epilepsy, by W S *Whitwell*, San Francisco, Cal

32 Solanum Carolinense in the Treatment of Epilepsy, by C S Barber, Brooklyn, N Y

33 Moral Treatment of Epilepsy, by H M Bannister, Chicago Ill

34 Surgical Treatment of Epilepsy, by Albert Vanderveer, Albany, N Y

35 *Disorders* of Sleep and Automatism in Epilepsy, by Sanger Brown, *Chicago*, Ill

OTHER PAPERS

36 Notes on the Nature and Treatment of Chorea Based on Seventy five Cases in Private *Practice*, by A D *Rockwell*, New York City

37 Suggestive Criminality by Arthur McDonald, Washington, *D C*

38 Transcendental Therapeutics, by Richard Dewey, Chicago, Ill

39 Some Atypical Forms of Tabies, by Theodore *Diller*, Pittsburg, Pa

40 Diagnosis in some Forms of Nervous and Mental Diseases by Irving C Rosse, Washington, D C

41 Reflex Neuroses, by James K *King*, Watkins, N Y

42 Post-Active Treatment of Narcotic Habitués, by J B Mathison, Brooklyn, N Y

43 Paranoia Differentially and Medico Legally Considered, by C H Hughes, St Louis, Mo

44 Migraine, its Causes and Radical Cure, by J B Kellogg, Battle Creek, Mich

45 The Neurotic Element in Pulmonary Consumption, by *Thomas J Mays, Philadelphia Pa*

46 The Degenerate Ear, by Eugene S Talbot Chicago, Ill

47 Right Hemiplegia and Aphasia—a Case, by H M Lash, of Indianapolis, Ind

48 Early Recognition and Proper Management of the Mentally Disturbed, by W S Watson, Fishkill on the Hudson, N Y

49 Alcoholic Coma coming under *Police Care*, by L D Mason, Brooklyn, N Y

50 The Responsibility of Opium, Chloral and Cocain Inebriates, by T D Crothers, Hartford, Conn

51 Notes of an Epidemic of Acute *Anterior* Poliomyelitis by C S Caverly, Rutland, Vt

Section on State Medicine —Liston H Montgomery, M.D, Chicago, Ill, *Chairman*, *Charles* H Shepard, M.D, Brooklyn, N Y, Secretary

Papers for Afternoon Session—Tuesday, May 7

1 Address by the President of the Section, by Liston H Montgomery, Chicago, Ill

2 Physical Training in Childhood and Youth as a Preventive of Disease, by C F Ulrich, Wheeling, W Va

3 Hygiene of the Eyes and Ears in Schools, by B Alex Randall, Philadelphia, Pa

4 Anticipative Treatment of Disease, Organically, Functionally and Specifically, by W G A Bonwill, Philadelphia, Pa

5 Municipal Hygiene, by Geo T Maxwell, Jacksonville, Florida

6 The Proper Relations of National, State and Municipal Quarantine, by Jerome Cochran, Montgomery, Ala

7 Sanitation, by Archelaus G Field, Des Moines, Iowa

8 Depopulation of Civilized Nations, by James W Cokenower, Des Moines, Iowa

9 Tuberculosis and Its Prevention, by Chas E Winslow, Albuquerque, N M

10 Prevention of Tuberculosis by Feeding, by E Cutter, New York City

11 The Use of Vaccine Serum in Variola, by Llewellyn Eliot, Washington, D C

12 The Necessity for Increased Hospital Accommodations for the Treatment of Contagious Diseases in Large Cities, by Benjamin Lee, Philadelphia, Pa

Afternoon Session—Wednesday, May 8

13 The Bath in Modern Medicine, by Chas H Shepard, Brooklyn, N Y

14 A Practical Demonstration on the Natural Facilities for Water Contamination, by R Harvey Reed, Columbus, Ohio

15 Importance of State Government Control of Artificial Agencies that may be Productive of Noises, by Augustus P Clarke, Cambridge, Mass

16 Reform in Medical Expert Testimony, by S S Herrick, San Francisco, Cal

17 The Gold in Garbage, by Douglas H Stewart, New York City

18 and 19 No titles given Drs Cressy A Wilbur, Lansing, Mich , F E Stewart, Detroit, Mich

20 Observations on Hydrophobia and the Pasteur Treatment by Antonio Lagorio, Chicago, Ill

21, 22 and 23 No titles given Drs Granville P Conn, Concord, N H , John L Davis, Cincinnati, Ohio , W C Woodward, Washington, D C

Afternoon Session—Thursday, May 9

24 Symposium on Alcohol N S Davis, Chicago, Ill , T D Crothers, Hartford, Conn , J H Kellogg, Battle Creek, Mich , I N Quimby, Jersey City, N J , W B French, Boston, Mass

25 Danger of Alcohol in the Grip, by Chas H Shepard, Brooklyn, N Y

26 Acute Alcohol Insanity as Distinguished from Delirium Tremens, by John Morris, Baltimore, Md

27 The Influence of Alcohol upon Urinary Toxicity, by J H Kellogg, Battle Creek, Mich

28 Report of a Series of Psychologic Tests, Showing the Effect of Alcohol in Moderate Doses upon the Nervous System, by Drs David Paulson and Howard F Rand

29 The Treatment of Typhoid Fever without Alcohol, by W H Riley, Battle Creek, Mich

30 Six Grave Cases of Typhoid Fever successfully Treated without Alcohol, by Kate Lindsay, Battle Creek, Mich

31 Alcohol in La Grippe, by C H Shepard, Brooklyn, N Y

32 Influence of Alcohol on the Blood, by Geo W Burleigh, California

33 Fatality of Surgical Operations in Alcoholism, by I N Quimby, Jersey City, N J

34 Some Factors in the Solution of the Alcoholic Problem, by F W Grosvenor, Buffalo, N Y

35 Alcoholic Intolerance and Predispositions, by T D Crothers, Hartford, Conn

36 Alcohol Anesthesia, by L D Mason, Brooklyn, N Y

37 Does Alcohol ever Act as Food or as a Generator of any Natural Force in the Living Body? by N S Davis, Chicago, Ill

Section on Obstetrics and Diseases of Women —Franklin H Martin, Chicago, Chairman, X O Werder, Pittsburg, Secretary

Preliminary Program, Session 1—May 7, 2 P M

Chairman's Address, Treatment of Fibroid Tumors of the Uterus, by Franklin H Martin, Chicago, Ill

1 The Method of good Operations and bad Fibroids, by Joseph Eastman, Indianapolis, Ind

2 Advantages of Abdominal Extra-Peritoneal Fixation of Pedicle in Hysterectomy for Fibroids, by Joseph Price, Philadelphia, Pa

3 Technique of new Method of Abdominal Hysterectomy, by Nicholas Senn, Chicago, Ill

4 Technique of Supra vaginal Hysterectomy, by B F Baer, Philadelphia, Pa

5 Present Status of Treatment of Fibroids of the Uterus by Electricity, by A Lapthorn Smith Montreal, Canada

6 Abdominal Ligation of the Uterine Arteries for Fibroids, by Byron Robinson, Chicago

7 Vaginal Ligation of Broad Ligaments for Fibroids, by C C Frederick, Buffalo, N Y

Discussion

Session 2—May 8, 11 A M

8 Hysterectomy for Pelvic Suppuration, by J M Baldy, Philadelphia, Pa

9 Indications for Total Hysterectomy, by Augustus P Clark, Cambridge, Mass

10 Total Hysterectomy by a new Vagino-Abdominal Method, by Albert H Tuttle, Boston, Mass

11 Vaginal Hysterectomy, by Edgar Garceau, Boston, Mass

12 The Treatment of the Stump in Oöphoro Salpingotomy—a new Method, by L H Dunning, Indianapolis, Ind

13 The Treatment of Inflammations of Uterine Appendages, by Augustin H Goelet, New York, N Y

Session 3—May 8, 2 P M

14 Hysterectomy for Puerperal Infection, by Reuben Peterson, Grand Rapids, Mich

15 Suppurative Forms of Ruptured Tubal Pregnancy, by Joseph Price, Philadelphia, Pa

16 Ectopic Gestation—Its Early Diagnosis and Treatment, by S L Jepson, Wheeling, W Va

17 Diseases of a Reflex Nature Arising from Pathologic Conditions of the Uterus and Appendages, by W H Humiston, Cleveland, Ohio

18 Two Interesting Cases of Pelvic Surgery, by H R Holmes, Portland, Oregon

19 Subject not announced By Eugene Boise, Grand Rapids, Mich

Session 4—May 9 11 A M

20 Suspensio Uteri—the proper Method of Performing It and Its Results, by Howard A Kelley, Baltimore, M D

21 Vaginal Fixation in Retro-Fixation of the Uterus, by X O Werder, Pittsburg, Pa

22 Ovarian Dermoids—with Cases, by J E Cowles, Los Angeles, Cal

23 The Treatment of Hemorrhagic Conditions of the Uterus by Zinc Amalgum Cataphoresis, by G Betton Massey, Philadelphia, Pa

Session 5—May 9, 2 P M

24 Symposium (*a*) The first American Symphysiotomy, by George M Gould, Philadelphia Pa , (*b*) Symphysiotomy, by Hugh Hamilton, Harrisburg, Pa , (*c*) Porro Operation vs Symphysiotomy, by Byron Robinson, Chicago, Ill , (*d*) Discussion

25 The Therapeutic Action of Chloroform in Parturition, by Bedford Brown, Alexandria, Va

26 Original Studies on the Obstetrical Forceps with Mechanical Demonstrations, by J J E Maher, New York, N Y

Session 6—May 10, 11 A M

27 The Vaginal Route for Operations on the Pelvic Viscera, by Tod Gilliam, Columbus, Ohio,

28 Subject not announced By E E Montgomery, Philadelphia, Pa

29 Subject not announced By John Milton Duff, Pittsburg, Pa

30 A new Self-Retaining Perineal Retractor, by A E Rockey, Portland, Oregon

31 Subject not announced By Llewellyn Eliot, Washington, D C

32 Episiotomy, by Frank A Stahl, Chicago, Ill

A few changes will be made in the above program Those reading papers will be limited in time to twenty minutes, those taking part in the discussions to five minutes each Those presenting papers will do well to prepare very short abstracts containing the gist of the paper which may be given to the reporters of Eastern journals for publication

FRANKLIN H MARTIN, Chairman

SOCIETY NEWS

The Nu Sigma Nu Fraternity will hold its thirteenth biennial convention May 13, 14 and 15 at Minneapolis with its University of Minnesota fraters The Association has a dozen chapters located in the different medical universities and a membership *which includes more than a thousand* prominent physicians It originated at the University of Michigan, the parent chapter being at present at Ann Arbor The object of the fraternity is the intellectual and moral advancement of medical practitioners and the elevation of the standard of the medical profession The last convention was held during the progress of the World's Fair at Chicago when the following grand officers were elected President, Dr John L Irwin, Detroit, Mich , Vice President, Dr James T Christison, St Paul Minn , Secretary, Dr Thad H Walker, Walkerville, Canada, Treasurer, Dr F G Stubbs, Chicago, Ill , Historian, Dr Ransom J Parker, New York City, N Y , Guard, Dr John H Macready, Cincinnati Ohio Elaborate preparation is being made by the twin cities for the entertainment of the delegates

Philadelphia Pathological Society —At the semi annual conversational meeting of the Philadelphia Pathological Society, to be held on Thursday, April 25, at 8 15 P M , in the hall of the *College of Physicians*, northeast corner of Thirteenth and Locust Streets, Dr George Dock, of the University of Michigan, will deliver an address entitled 'Trichomonas as a Parasite of Man" Members of the profession are cordially invited to be present AUGUSTUS A ESHNER, Secretary

Association of American Medical Colleges —The sixth annual meeting of the Association of American Medical Colleges will occur at the Rennert, Baltimore, Md , at 2 P M , Wednesday May 8, 1895

BOOK NOTICES

Degeneration By MAX NORDAU Translated from the Second Edition of the German work , 8vo, pages 560 , cloth New York D Appleton & Co 1895

This work is one of the healthiest tonics of the present century It is seldom a book is written with such originality, with such keen insight into poor, weak and erring human nature, and although the tendency of the book is distinctly pessimistic, yet it is as well that the full measure of the degeneracy of the present age should be exposed and made clear, as that a foul ulcer or sinus should be probed to its extremity in order that a cure may be effected Nor is it fair to charge this author with being an unreasonable cynic, for "the plain dealing remonstrances of a friend differ as widely from the rancor of the misanthrope as the probe of the surgeon from the dagger of the assassin "

The work is divided into five books—Book I, *Fin de siecle*, which comprises four chapters, as follows I, the Dusk of the Nations , II, the Symptoms , III, Diagnosis , IV, Etiology Book II, Mysticism, containing six chapters, namely I, the Psychology of Mysticism , II, the pre Raphaelites , III, Symbolism , IV, Tolstoism , V, the Richard Wagner Cult, and VI, Parodies of Mysticism

Book III on Ego-Mania has five chapters, as follows the Psychology of Ego Mania, Parnassians and Diabolists, Decadents and Æsthetes, Ibsenism and Friedrich Nietzsche Book IV on Realism, has two chapters Zola and his School , and the Young German Plagiarists Book V, the Twentieth Century, has two chapters on Prognosis and Therapeutics

It is impossible for an educated man, especially if ,he be a physician with a metaphysical turn of mind, to begin reading this book without perusing it to the end, as not only is it very interesting reading, but it presents old facts and new theories with such wit and wisdom as to keep one's interest throughout We can not refrain from giving an extract from this highly original and very timely work Page 7

'Let us follow in the train frequenting the palaces of European capitals, the highways of fashionable watering places, the receptions of the rich, and observe the figures of which it is composed

"*Among the women, one wears her hair* combed smoothly back and down like Rafael's Maddalena Doni in the Uffizi at Florence , another wears it drawn up high over the temples like Julia, daughter of Titus or Plotina, wife of Trajan, in the busts in the Louvre , a third has hers cut short in front on the brow and long in the nape, waved and lightly puffed, after the fashion of the fifteenth century, as may be seen in the pages and young knights of Giovanni Bellini, Botticelli and Mantegna Many have their hair dyed, and in such a fashion as to be startling in its revolt against the law of organic harmony, and the effect of a studied discord, only to be resolved into the higher polyphony of the toilet taken as a whole This swarthy, dark eyed woman snaps her finger at nature by framing the brown tones of her face in copper red or golden-yellow , yonder blue eyed fair, with a complexion of milk and roses, intensifies the brightness of her cheeks by a setting of artificially blue black tresses Here is one who covers her head with a huge heavy felt hat, an obvious imitation, in its brim turned up at the back, and its trimming of large plush balls, of the sombrero of the Spanish bull fighters, who were displaying their skill in Paris at the exhibition of 1889, and giving all kinds of *motifs* to modistes There is another who has stuck on her hair the emerald green or ruby red *biretta* of the mediæval traveling student The costume is in keeping with the bizarre coiffure Here is a mantle reaching to the waist, slit up on one side, draping the breast like a *portiere*, and trimmed round the hem with little silken bells, by the incessant clicking of which a sensitive spectator would in a very short time either be hypnotized or driven to take frantic flight There is a Greek *peplos*, of which the tailors speak as glibly as any venerable philologist Next to the stiff monumental trim of Catharine de Medici, and the high ruff of Mary, Queen of Scotts, goes the flowing white raiment of the Angel of the Annunciation in Memling's pictures, and, by way of antithesis, that caricature of masculine array, the fitting cloth coat, with widely opened lapels, waistcoat, stiffened shirt front, small stand-up collar and necktie The majority, anxious to be inconspicuous in unimaginative mediocrity, seems to have for its leading style a labored rococo, with bewildering oblique lines, incomprehensible swellings, puffings, expansions and contractions, folds with irrational beginning and aimless ending, in which all the outlines of the human figure are lost, and which cause women's bodies to resemble now a beast of the Apocalypse, now an armchair, now a triptych, or some other ornament

"The children, strolling beside their mothers thus bedecked, are embodiments of one of the most afflicting aberrations into which the mind of a spinster ever lapsed They are living copies of the pictures of Kate Greenaway, whose love of children, diverted from its natural outlet, has sought gratification in the most affected style of drawing, wherein the sacredness of childhood is profaned under absurd disguises Here is an imp dressed from head to foot in the blood red garb of a mediæval executioner , there a four year-old girl wears a cabriolet bonnet of her great-grandmother's days and sweeps after her a court mantle of loud hued velvet *Another* wee dot, just able to keep on her tottering legs, has been arrayed in the long dress of a lady of the First Empire, with puffed sleeves and short waist

" The men complete the picture They are preserved from excessive oddity through fear of the Philistine's laugh, or through some remains of sanity in taste, and, with the exception of the red dress coat with metal buttons, and knee-breeches with silk stockings, with which some idiots in eyeglass and gardenia try to rival burlesque actors, present little deviation from the ruling canon of the masculine attire of the day But fancy plays the more freely among their hair *One* displays the short curls and the wavy double-pointed beard of Lucius Verus, *another looks* like the whiskered cat in a Japanese *kakemono* His neighbor has the *barbiche* of Henry IV , another the fierce mustache of a lansquenet by F Brun, or the chin tuft of the city watch in Rembrandt's 'Ronde de Nuit'"

On ego mania, the author pays his respects to Oscar Wilde as follows

" The ego mania of decadentism, *its love of* the artificial its aversion to nature, and to all forms of activity and movement, its megalo*maniacal* contempt for men, and its exaggeration of the importance of art, have found their English representatives among the æsthetes, the chief of whom is Oscar Wilde

“Wilde has done more by his personal eccentricities than by his works It is asserted that he has walked down Pall Mall in the afternoon dressed in doublet and breeches, with a picturesque biretta on his head, and a sunflower in his hand, the quasi-heraldic symbol of the æsthetes This anecdote has been reproduced in all the biographies of Wilde, and I have nowhere seen it denied But is a promenade with a sunflower in the hand also inspired by a craving for the beautiful? Be that as it may, Wilde obtained, by his buffoon mummery, a notoriety in the whole Anglo Saxon world that his poems and his dreams would never have acquired for him Oscar Wilde apparently admires immorality, sin and crime The æsthetes carry themselves as if they were the soul of humanity and make a parade of their contempt for the Philistine They belong, however, to elements of the race which are most inimical to society, insensible to its tasks and interests, without the capacity to comprehend a serious thought or a fruitful deed This rabble, which claims for itself a top place in the scale of intellectual rank and freedom from the restraint of all moral laws as its most noble privilege, is certainly baser than the lowest scavenger Ego-maniacs, decadents and æsthetes have completely gathered under their banner this refuse of civilized peoples, and march at its head”

Had Nordau access to the court papers and to the Marquis of Queensberry in advance of the recent *denouement?* It seems very unlikely, but after all it is critical science which has enabled him thus early to point out the fact that persons of Wilde's stamp are not only “degenerates” but “perverts” We repeat, as it was said in the beginning, that this book will prove to be one of the most healthy tonics to offset the insidious invasions of the false theories of a degenerate age

PUBLIC HEALTH

Disposal of Garbage —There is promise, in the increased attention now being paid to the disposal of garbage by sanitarians, physicians and engineers, of a satisfactory solution of the vexing problem Recent papers by Drs Thomas H Manley and Douglas H Stewart, of New York City, as well as the paper on the “Collection and Disposal of the Refuse and Garbage of Large Cities,” presented by Mr W F Morse at the Montreal meeting of the American Public Health Association, clearly indicate the lines on which this solution must be attained Possibly Dr Manley is a little optimistic in his trust that the individual may be educated out of his indolent and thriftless habits and so be made to do any important share of the work necessary for the inoffensive disposal of the waste and refuse his daily life creates But the effort is certainly worth trying, whether it succeeds in making “this material, now treated as offal and a nuisance, a source of revenue to every householder,” or not

Mortality by Influenza in New York in February —The monthly *Bulletin* of the New York State Board of Health charges 3,000 deaths to la grippe in the present epidemic Of this number 1,600 deaths are estimated in the month of February, and 1,400 in January, or 57 each day in the second month against 45 each day in the first month A like mortality is predicted by the reporter in March The mortality by influenza is partially masked under an excessively high total by consumption, whose mortality is always accelerated and intensified by that other cause Deaths from old age as is usual in epidemic winters were precipitated, the enormously large death rate in old people has been repeatedly commented upon as a feature of the epidemic prevalence of influenza in London and Glasgow in the present winter There was a great increase in the respiratory deaths, and also in that “waste-basket of causes,” the unclassified Of this latter, some of which was influenza doubtless, the total for February was 1 621 in a total of 10,771 deaths, a plan of statement that leaves every subject of comparison dubious and debatable

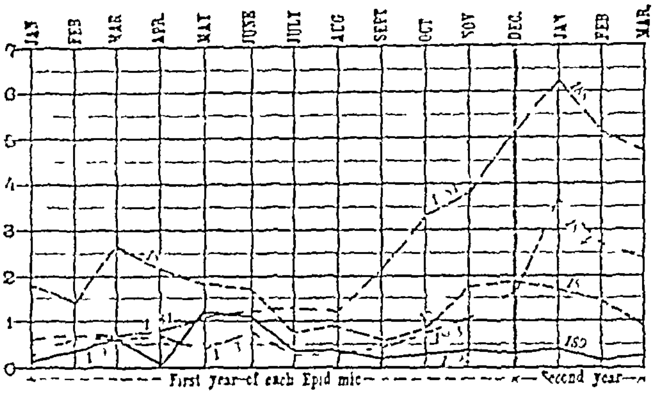
Stringent Rules Governing the Pollution of Streams —The New York State Board of Health has passed certain regulations that have operated very favorably for the protection of the water supply of Brooklyn As a consequence, the agricultural use of quite a large acreage has been restricted at Springfield on Long Island The farmers having grievances on this account will sue the city of Brooklyn for indemnification for the lost use of their farm lands that border on that city's water courses The rules of the State Board were put in force in August, 1894, the particular clause in those rules which seems to have aroused a feeling of antagonism among the Long Islanders is one which prohibits the fertilizing of land within fifty and one hundred feet of the streams The enforcement of this law will throw into disuse large tracts of land which have heretofore been cultivated as vegetable gardens by the tenants of the houses This means a great depreciation in the value of the property, the owners say, and they are inclined to question the power of the city to practically condemn the land without the payment of damages The interested parties are considering the matter with a view of petitioning the authorities to so amend the objectionable law that their tenants may continue in the same old way so far as concerns the cultivation of their gardens

Beef vs Horseflesh —What is termed a “beef famine” is now impending in this country, simultaneously with which it is noted that hundreds of thousands of wild horses are roaming our Western plains wasting the grazing needed for cattle These animals have little or no market value—$2 being the highest quoted price—and yet the consumption of horseflesh is increasing so rapidly in Europe that worn-out horses for which butchers formerly paid only from $5 to $10 are now worth $45 to $50 Mr E W Tingle, United States Consul at Brunswick, Germany, sees here a great opportunity for American packers Upward of 20,000 horses are annually slaughtered for sausage meat in the Paris abattoirs alone These animals are carefully examined by competent veterinary authority and only absolutely healthy ones are accepted The *chevaline*, or horse sausage, has become so popular that the *Commite d' Hygiene* of Paris has been appealed to, to discriminate against its sale by some form of label The *Commite* has adopted a method devised by two German chemists, MM Edelmann and Brautigan, of distinguishing between the *chevaline* and ordinary sausage This consists in adding to a bouillon of the sausage meat, acidulated with a 5 per cent solution of commercial nitric acid, a few drops of iodized water or Gram's solution, which are allowed to flow down the sides of the tube containing the bouillon With the horse bouillon there is formed a violet-red brown ring, which is not developed in veal, beef, mutton, pork, dog or chicken bouillon As determined by this test, all horse sausages will be henceforth labeled accordingly, but it is not believed that the label will diminish the popularity of the *chevaline* The proper place for its manufacture is, however, as Mr Tingle might have suggested, in our Western States where wild horses multiply so rapidly that stallions are declared to be *feræ naturæ* and may be shot down on sight

Winter Mortality of Chicago —Dr A R Reynolds, Health Commissioner of Chicago, compares the mortality of the winter quarter of 1895, ended March 31, with the mortality of the corresponding period in previous years The comparison shows an increase of 27 per cent in the total mortality of 1894 The total deaths from all causes during the quarter were 6,648—an annual rate of 16 62 per thousand of 1,600,000 population, the average death rate of the corresponding quarter for the previous ten years, 1885–1894 inclusive—was 19 10 per thousand, the lowest in 1894—13 05 per thousand, the highest in 1891—23 10 per thousand Acute lung diseases, complicated with influenza, are responsible for the increased death rate This group, pneumonia, bronchitis and influenza, shows an increase of 143 per cent, as compared with the winter quarter of 1894 and pulmonary consumption shows an increase of 12 5 per cent The Commissioner says that the prevalence of influenza has been more general than is indicated by the number of deaths (142) returned as from that cause To its complications are to be attributed the great severity and fatality of pneumonia and bronchitis, as well as a large number of non fatal cases of illness of masked or obscure symptoms which have affected the tone of the general health of the community and especially of the aged and enfeebled It is, however, the unusual seasonal influences which have caused the increased death rate, rather than the prevalence of influenza The mean temperature for the month of January was 6 8 degrees lower than the average January temperature of the previous twenty five years, and the extremes ranged between 9 degrees below zero to 51 degrees above During February the deficiency in temperature and the range of extremes was still more marked, the mean temperature was 10 7 degrees below the normal, the accumulated deficiency of daily mean temperature at the close of the month was 50 4 degrees, and the extremes ranged from 15 degrees below zero on the 8th of the month to 61 degrees on the 28th—a range of 76 degrees More than half the month was cloudy or partly cloudy, with an excess of humidity During this month the deaths from pneumonia rose in number from 163 in January to 444, or nearly one half of the total number for the quarter

Concerning smallpox, Dr Reynolds says "With the close of the first quarter of 1895 it seems to be entirely safe to say that the fourth serious—and at one time the most threatening—visitation of smallpox upon Chicago is at an end The disease has steadily declined since June, 1894, that is to say, from a period within thirty days after the great vaccination campaign was fairly *inaugurated* That work is now conceded, both in this country and abroad, to be one of the most signal triumphs of preventive medicine on record, and a feat of sanitary administration without a parallel in respect of magnitude and diversity of population dealt with, of successful avoidance of overt opposition to the enforcement of health ordinances and regulations, and of direct results in the prompt check and ultimate suppression of the ravages of a pestilence In many respects there is a striking parallel between the four great smallpox epidemics in Chicago—the first beginning in December, 1862, and continuing to June, 1864, the second beginning in October, 1871, and continuing to January, 1874, the third beginning in April, 1880, and continuing to June 1883, and the latest beginning in June, 1893, and now substantially at an end The features *common to these* epidemics are the great historic events, involving large movements of population, transient or permanent, which occurred at the corresponding periods as when, in 1862, during the Civil War, Chicago received large numbers of Confederate prisoners and of *immigrants, both of which* classes repeatedly introduced the smallpox *contagion*, again, in 1871–72, when the rebuilding of the *city after the Great Fire* attracted thousands of immigrants both domestic and foreign, again, in 1880, when there began the heaviest immigration movement in the history of the *country*, and, finally, in 1893, the World's Fair year Preceding each of these epidemics there had been periods of entire freedom *from the disease*, and the few scattering cases which broke these periods were readily dealt with and created no alarm, so that vaccination became more and more neglected and the aggregation of susceptibles larger and larger until the explosion ensued In neither of the first three epidemics was it *found feasible* to secure vaccination on any adequate scale—in fact, Dr Rauch, in his "Sanitary History of Chicago," says there was no provision for gratuitous vaccination in the epidemic that began in 1862, and that "the neglect of this precautionary measure was the cause of the daily increase *of cases which* continued for nearly two years after" And again, in speaking of the epidemic of 1871–74 the same eminent authority shows that it was not until "January, 1874, that the diminished susceptibility of the population and the amount of vaccinal protection which had been secured resulted in a marked decrease" In the last preceding epidemic, that of 1880–83, greater effort was made to secure vaccination, but only 48,900 vaccinations were performed in 1881 and 110,540 in 1882—or a little more than 28 per cent of the population in the two years It was not until the National Board of Health undertook the inspection and vaccination of every unprotected immigrant arriving in Chicago that this epidemic was materially checked in January, 1883 Last year a total of 1,069,500 free vaccinations were performed—586,000 in the month of May The accompanying diagram shows the result

SMALL POX DEATHS, PER 10 000 OF POPULATION



The solid black line indicating the course of this epidemic, shows the highest mortality in May, 1894, when there were 253 deaths, or 1 61 to each 10 000 of population The decline since then is striking when compared with the broken lines indicating the course of the previous epidemics at corresponding months The slight increase shown in January was caused by importations from Roby, the drainage canal and other points outside the city, that shown in March, by a colony of negroes from Tennessee and by refugees from the South

As an epidemic, smallpox ceased in Chicago within thirty days after it became possible to secure an adequate supply of pure and efficient vaccine

Comparative figures of the four epidemics

Epidemic of	Highest Monthly Mortality	Death per 10,000 of Population
1862–64	January, 1864	3 66
1871–74	March, 1872	2 64
1880–83	January, 1882	6 15
1893–95	May, 1894	1 61

Mortality at the close of the first quarter of 1895, and for corresponding periods

March, 1864 2 46 deaths per 10,000 of population
" 1873, 0 95 " " "
" 1882, 4 67 " " "
" 1895, 0 22 " " "

MISCELLANY

Neurological Infirmary at Flushing, N Y—The following *named physicians* have formed a syndicate for the purpose of establishing at Flushing, Long Island, a hospital to which *they can send their* patients—Drs E G Janeway, F S Dennis, J D Bryant, W T Bull and E M Hamilton The start will be made with rooms for thirty patients, under the personal charge of Drs Killilea, Constable and Burchard The nervous diseases will have the first claim upon the institution

Lay Comments on a Lithopædion—A surgical operation was recently performed at the Religio Medici General Hospital at X——, for the removal of a lithopædion from an adult male The operation was successful as to the delivery by laparotomy, of the fetal remains, but the parent did not survive Two ladies traveling in one of our public conveyances were overheard discussing the singular operation One of them remarked "So odd, was it not, and in a young man, at that" "Yes," replied the other in a subdued tone of voice, "and a bachelor too"

Dentists' Relations Not Confidential—During the trial of the case of The People vs Stonewall J De France for forgery, the defense attempted to raise a question of identity, for which purpose they showed that the teeth of the accused were entirely different from those of the person committing the forgery as alleged In rebuttal, a dentist of Detroit was cited who testified that subsequent to the date of the forgery he had inserted three false teeth in the place of two incisors for De France The case was carried up on appeal to the Supreme Court of Michigan, on the ground that the trial court had erred in admitting the dentist's testimony, claiming that his knowledge was privileged as between physicians or surgeons and patients The Supreme Court affirmed the verdict of conviction and held that the terms "dentist" and "physician or surgeon," as the latter are used in the statute covering this point, are not interchangeable and that a dentist's relations with his patient can not be considered confidential as is the case with a physician or surgeon

Quackery in China—In the far off province of Yun-nan of southwestern China there are divisions in medical practice not unlike those America and Europe know There are "regulars" and there are quacks—and it is difficult to tell which of the two are the more unsafe A missionary writes to one of our cotemporaries "Quack doctors are commonly to be met with at every fair and on every market day, and they interfere not a little with the regular and resident practitioners of the city So far as the people are concerned it makes but little difference which of them treats their cases, for the local and the itinerant doctors are alike ignorant of the first principles of anatomy, physiology or medicine"

Legislation Against Coroners in New York—Although the present constitution puts it in the power of that State Legislature to wipe out the old and much abused coronorial system, very little progress has been made A bill has been introduced and shelved at the instance of the present officers, on the ground that the latter should have an opportunity to "examine" the bill The bill, if accepted, will be very far from satisfactory to the reform element that has in view a complete substitution of the old system, by another resembling the medical examiner system of Massachusetts There are now four coroners for New York County, with a salary of $5,000 and $3,000 for expenses If the new plan is adopted there will be, after the term of the present officers shall have expired, one coroner at $10,000 and a like amount for expenses and clerk hire The most important feature of the bill is one that authorizes the coroner to appoint six qualified physicians as medical examiners at salaries from $3,000 to $5,000 Coroners' juries will be abolished An inquest will be held by the coroner with a stenographer present to take down the evidence

Ambulance Cars on Trolley Lines—Dr Z Taylor Emery, Health Commissioner of Brooklyn, it is reported purposes to add a trolley service to the very ample ambulance system of that city As we believe, Dr George Homan, Health Officer for St Louis, has been the first to secure that public service for a city He attempted to induce the Legislature to pass a law providing for the service, but when this effort failed he succeeded in interesting the officers of the railroad companies in the subject As a result a trolley car has been equipped as an ambulance and it will soon be running on schedule time over all the trolley lines in the city It is not intended that the car should take the place of the emergency ambulance service A large proportion of hospital patients are transferred from houses and could await the arrival of the car on its schedule time The transfer can be made by the car much more comfortably than by the ordinary ambulances The St Louis car is thirty-three feet long and is divided into two compartments by a movable partition It is lighted and heated by electricity and contains reclining chairs, stretchers and such surgical appliances as may be needed, and is manned by a trained nurse and a surgeon Dr Homan believes the car will give great satisfaction not only to the hospitals, but to the people who are compelled to use it

"**Hobbies**"—We presume medical journals, like everybody else, have the right to ride hobbies, but when one is ridden to such extremes as our Pittsburg cotemporary does, that of advertising in the Journal of the American Medical Association, it makes us very weary We could have some patience with our neighbor's crotchets so long as he practiced what he preached But now that he is advertising Fairchild's "Panopepton," "Baker's Codliver Oil," "Mackintosh Supporters," "Alloinum," Marchand's "Peroxid," Fehr's "Compound Talcum," Boehringer's Cocain," Parke, Davis' "Kola Cordial," together with patent adjustable eyeglasses, mineral waters without end, Hoff's 'Extract of Malt" liquors, wholesale and retail, private maternity retreats, etc, etc, all excellent in their way, but no better or no worse than many of those advertised in the Journal of the American Medical Association, we think it is time to let up on the old "chestnnt" of advertising in the Journal of the American Medical Association—*Cleveland Medical Gazette*

Did Marie Stuart Have the Influenza?—Nothing reconciles your true Briton to any physical affliction so thoroughly as that he shall have shared it in common with royalty The recent prevalence of influenza in England and Scotland has caused a search to be made for illustrious sufferers from the malady, the latest result of which is that Mary, Queen of Scots, had an attack in November, 1562, of a distemper "which no doubt was influenza" It was thus described by Thomas Randolph in a letter to Cecil "May it please your Honours, immediately on the Queen's arrival here she fell acquainted with a new disease that is common in this town, called here the New Acquaintance, which passed through her whole Court, neither sparing lord, lady, nor damoiselle, not so much as either French or English It is a pain in their heads that have it, and a soreness in their stomachs, with a general cough that remaineth with some longer, with others shorter time, as it findeth apt bodies for the nature of the disease The Queen kept her bed six days There was no appearance of danger, nor many that die of the disease, except some old folk My Lord of Murray is now presently in it, the Lord of Liddington hath had it" It may be that the "New Acquaintance" was, in fact, influenza, but Hirsch makes no record of the disease in England until 1688 There was, however, a general diffusion of influenza in Europe in 1557 and in Italy in 1562 Mary left France for Scotland in August, 1561, and it might be presumed that she brought the disease with her if it were not that Randolph asserts that the "New Acquaintance" was already common in Scotland before her arrival

An Areopagus Needed—Reviewing Dr H M Bannister's authorized translation of "A Practical Manual of Mental Medicine," by Dr E Régis, the *Dublin Journal of Medical Science* discloses in its prefatory remarks, an unusually intimate acquaintance with matters and things American Referring to the fact that this volume is the first instance of a work treating of mental alienism, written by an alienist, translated by an alienist and, under the direction of an alienist, printed and bound by the insane—the inmates of the Utica Insane Asylum—the *Journal* says "Recently there has been, at the Utica Asylum, one of those crises which periodically disturb the government of all such places The lay committee and the medical staff having differed—as we understand, originally on the subtle and difficult question of how far it was the medical superintendent's duty to keep the committee men supplied through the winter with flowers and grapes grown in the asylum greenhouses—it was decided by the more powerful party that changes must be made, and one of these has been to suppress the Utica press, to force the *American Journal of Insan-*

ity to seek more hospitable and civilized quarters, and to deprive of a useful and remunerative employment a large number of the unfortunate patients, who, as usual, are the ultimate sufferers when the medical staff are attacked But we have not space to more than glance at this somewhat vulgar and brutal exercise of authority nor can we pretend to any of the inspiration needed for a new Areopagitica Others must plead for 'the liberty of unlicensed printing, which appears now to require an advocate in the sublime and enlightened Republic of the West"

Solving the Problem of Paternity—Possibly it is Mark Twain's retort to M Paul Blouet that is responsible for the story cabled on the 30th ult, by the London correspondent of the New York *Sun* To the flippant Frenchman's fling—that when a wealthy American had nothing else to do he employed himself trying to discover his grandfather—Twain replied that it was different with the Frenchman, rich or poor, his concern is as to the identity of his father Now it *is alleged that M Groussier, of Paris, has discovered a scien*tific means of tracing the paternity of children who know *not their own fathers, and adds 'It is easy to understand* with what alarm the news of such a discovery will be received in a country *where illegitimacy is so common as* in France" The dispatch fails to define M Groussier's law, out quotes MM Bertillon, Zola and Jules Simon as indorsing the claim Only M Rochefort, is skeptical and declares that Paternity is like the philosopher's stone—you may look for it as much as you like but you will never find it," in which the editor of *l'Intransigeant* seems to agree with Shylock's serving man, Master Launcelot Gobbo who says It is a wise father that knows his own child" The correspondent declares that M Groussier is overwhelmed not only by requests to apply his law in individual cases, *but by threats of direct evils unless he aban*dons his inquisitorial investigations into domestic secrets It is more *than likely that the dispatch is misdated, it was* evidently intended for the First of April

Amelioration of Steamship Regulations at the New York Quarantine—The Treasury Department acting in conjunction with the Health Officer of the Port, Dr A H Doty, has instituted easier conditions for the large steamship companies who bring to the New York harbor so many thousands of first cabin passengers every year *The arrangements* are not consummated, but the coming summer travel will probably be provided for in such a way that incoming steamers may pass up as late as 9 P M Passengers arriving in New York on the great ocean liners will then be able to leave the ships and take their baggage with them without delay, no matter at what hour of the day or night the ship may reach port The Treasury Department *will soon have the necessary ar*rangements made by which the baggage of steamers reaching New York after sundown will be inspected and passed at once At present, if a vessel reaches her pier after the sun goes down, nothing is done until the next day, and though the passengers may leave *for the night they must return* for their baggage the next morning This is a cause of much annoyance, *especially to passengers desiring* to take trains from New York the same night they arrive The companies will make *a great saving of money by this* concession, but they will be obliged, under the arrangements made with Dr Doty, *to provide a powerful diffused electric* light for the examination *of the passengers* The satisfactory examination of steerage *passengers* has not heretofore been considered a possible thing after the decline of the sunlight By the use of a suitable electric lighting plant, carried by each of the vessels, that will come in under the new rules, the medical examiners will be able, it is stated, to pass upon all debatable cases as well after sundown as before It is electricity, as applied to this use, that has enabled the authorities to venture on the change Whatever may take place later, it is not proposed to extend the time after 9 o'clock in the case of any of the liners until the present concession *has been thoroughly tested Infectious* disease manifesting itself among or from recent immigrants should receive careful attention of local Officers of Health in every State, as a means of determining whether the night admission through the Port of New York is a temporary innovation or a fixture

Fined for Contempt of Court for Refusing to give Expert Testimony Without Remuneration Therefor—ACTION OF THE SPRINGFIELD (ILL) MEDICAL CLUB The decision of Judge Creighton in the January, 1895, term of the Circuit Court of Sangamon County, involving the principle of the payment of fees for expert testimony is of interest to the medical profession

As a test case an appeal has been taken to the Appellate Court of the *Third District* which convenes in May Eventually it will be *carried to the Supreme Court*

In a suit for damages for injury caused by a defective sidewalk, brought by Olive Purdy against the City of Springfield, Illinois, *Dr J N Dixon* was called as an expert witness on the part of the defendant, and as an expert only, and when asked a hypothetical question, declined to answer on the ground that an expert witness is entitled to a different and greater compensation *than an* ordinary witness is allowed, and that an expert is not required to give expert *testimony* without compensation *as an* expert, unless a reasonable compensation shall have been paid or provided for, *that he had not been paid nor* offered anything for compensation for his expert or professional opinion in the case, a fee (of $10) having been asked for and expressly refused

The judge said 'It is the opinion of the court that you are not entitled to receive any such fee, but it is your duty to testify as an expert witness"

The witness still refusing to answer, the judge *ordered* that the hypothetical question be again put to the witness with the warning that if he should refuse to answer he would be held in contempt, saying

The court is of the opinion that it is the duty of every person summoned as a witness in this State, *to obey the pro*cess of the court and to testify, and that it is wholly *immaterial* whether *the man* be called *from his labor as a mere* laborer, or called from his bank, or called from his store, or called *from a lawyer's office, or called from a doctor's office*, it is the duty of every citizen to respond to the process of the court and answer as a *witness, and give the court the* benefit of any knowledge he may have of facts, or any knowledge he may have of science or otherwise, which *will* be of benefit in determining the truth in the controversies that arise between litigants in *this* State, so *far* as that can be done by simply giving testimony in open court

'Of course the court has *no power* to compel an expert to make an examination outside of court, or to prepare himself to testify, but so far as *the* witness is able to respond to proper *questions* propounded to him on the trial of a cause, while he is upon the witness stand, without previously making *special preparation or examination* to enable him to answer that particular question, I think it is his duty to answer Especially the court holds is *that true of physicians* Physicians *in this* State are favored children of the State, a department of the State government is *maintained* very *largely for their benefit*, they hold a license to practice their profession and practice by grace as well as *by right, and are so hedged* about and protected by the laws of the State, and by public opinion and confidence, that in five *minutes of time a doctor* may earn more than an ordinary laborer could earn in a day, and may continue to earn such *fees all day long even on a day* he may be required to attend court, except the hour or so devoted to attending on the court *Very much of that* is because *of the* laws of the State which nurse their profession, and by grace which the Staté and *society* extends to *them in* regard to *their* profession, and when the State through its court calls upon them as experts to help it in an hour of need, they ought *to respond* as cheerfully and promptly as any class of citizens in the State The farmer who knows how to plant corn and raise hogs *is an ex*pert, the banker is an expert, the section hand on the railroad is an expert, the merchant is an expert, every citizen who is *of any value to himself* or anybody else is, in some field an expert, and may be called upon sometimes to testify as an expert, and there is no *reason* why one class should have different rights or other rights than every class has It is absolutely impracticable to provide *a system of* expert fees for every class, the banker might claim he could earn a hundred dollars a day, the merchant might claim *he could* earn fifty dollars a day by attending to his business, the ditch digger might claim he could earn ten dollars by *digging in his ditch, and so on along* the line A system of expert witness fees which would give every man who is called *upon* to testify as an expert, *professional* compensation would make the administration of justice absolutely impracticable, would amount to requiring the litigant *to* purchase justice, which the constitution forbids There is no law in *this* State that provides for paying experts professional fees, that is, when they are not called upon to make particular preparation outside court for testifying in the case If a man who has a case to try wants an expert to examine something outside of court and hires that expert to do it, it is just like hiring a man to do anything else, and whatever he agrees to pay him or whatever the service is reasonably worth he must pay, the same as when any other service is performed under contract or by request The court could not make any person go outside the court to do any act to qualify himself to testify in any particular case, but the court can compel witnesses to come into court and compel them to answer, so far as they are able to do at the time, every proper question put to them, and that is as true of expert witnesses as of any other, and it is the opinion of the court that this witness ought to answer, and it is the order of the court that he shall answer"

The witness declining to answer, the court found him guilty of contempt fixing his fine at $25

At a meeting of the Springfield Medical Club held March 27, 1895, the following preamble and resolutions were presented by the committee appointed at a previous meeting and adopted by the society

Whereas, physicians are summoned at times before the courts to give answers to hypothetical questions independent of a personal knowledge of the facts in the case, answers which impose unusual responsibilities and to this extent are different from the ordinary testimony concerning questions of fact, and on this account are believed to be worthy of greater compensation, and

Whereas, in a recent action in the district court it was developed that a judicial opinion of the highest courts in this State on the question of unusual compensation for expert testimony has not been handed down *Therefore, be it*

Resolved, That the appeal of Dr J N Dixon from the decision rendered in the District Court should by supported by the medical profession in order that the point of law involved may be definitely determined, and,

Resolved, That this preamble and resolution be submitted to the members of the profession in this State, and the different societies, and their financial aid be requested

L C Taylor,
George F Stericker, } Com
George N Kreidep,

Louisville Notes.

Smallpox —Smallpox is unusually prevalent through the State, and grave fears are apprehended that a serious epidemic may be the result of the isolated cases found here and there Princeton has one case, with rumors of others, Ashland has five cases in the pesthouse, and there were five cases found along the public landing at Cincinnati and one man has died from it in Jeffersonville, Ind, just across the river from Louisville The cases which developed have almost universally been negroes, and wherever found have been surrounded by many others who are unprotected The State Board of Health has considered it of enough importance to issue a manifesto, signed by its President, Dr Mathews, and Secretary, Dr McCormack, making suggestions looking toward the prevention of smallpox It is addressed to the "Health Officials, Physicians and People of Kentucky" It states that "vaccination and re-vaccination properly done, with reliable virus, is a certain preventive, and is entirely free from danger Although it is a statutory offense to neglect vaccination, and ample authority is given to city councils and county courts to provide for the poor in this regard, it is estimated that over one-third of the people of this State have never availed themselves of it" The circular further calls attention to the penalties for failure to report cases, advises vaccination of all negroes, especially, who come from infected districts All school children in this city have been vaccinated, and it is believed Louisville is in a good sanitary condition

Allen —Dr D B Allen, a prominent and wealthy citizen of Warsaw, Ky, shot and killed himself in despondency following the grip, March 25, 1895

Grooms —Dr S H Grooms, until recently a prominent physician of Mercer County, lately of Wilmore, Jessamin County, died on March 28 of pneumonia

Kentucky School of Medicine —The graduating class of this institution has sustained a loss in the death of one of its members, Mr William Washington Culpepper, of Pleasant Grove, Texas He died on March 29 at the Hospital of the Kentucky School, of pneumonia

Death Returns —The reports for the week show a total of ninety-two deaths, twenty-two were due to pneumonia, ten to consumption, eight from organic disease of the heart During the month there were 349 deaths, 92 were due to pneumonia, 22 from meningitis, 35 from consumption There were eighteen still births Twenty deaths occurred at the City Hospital.

Children's Free Hospital —The third annual report of this institution has just been issued In 1894, ninety-two children were treated and seventy-one of them discharged In the three years, 264 children sought relief and 243 were discharged The financial report is as follows

Jan 11, 1894—Balance on hand	$1 044 71
Receipts during the year	4,205 88
Total	$5 250 59
Expenses	4,859 15
Balance	$ 391 46

There are at present 211 "endowed beds," $2,000 being paid to the treasurer of the endowment fund for the maintenance of each There are ten 'supported beds," $120 annually being required to meet this end There are seventeen honorary members, each paying $25 annually to the support of the hospital Thirty-three doctors were in attendance on the patients during the year There were three deaths in the year On March 27, that date being the anniversary of the cyclone, which caused the hospital to be founded, the *Courier Journal* was issued and edited by women, containing forty pages, and the proceeds, amounting to something over $6,000, went into the coffers of the Children's Hospital

Washington Notes

Medical Association of the District —The regular meeting of the Association was held April 2, for the election of officers for the ensuing year, new members, and delegates to the American Medical Association One hundred and forty-five members were present The election resulted as follows C H A Kleinschmidt, President, S S Adams and J D Morgan, Vice Presidents, J R Wellington, Secretary, H M Deeble Treasurer, Drs Woodward, Mayfield and McLaughlin, Censors, Drs Cook, Kober, McLain, Acker, Yarnall, Ober, Holden, Stone and Leech, Counselors, delegates to the American Medical Association meeting at Baltimore, Md, Drs S S Adams, Acker, Balloch, Bovee, Bryan, Busey, Carr, Chappell, Cook, J Eliot, Franzoni, Fry, Barker, Heiberger, Hill, Holden, J Tabor Johnson, W W Johnston, Kerr, A F A King, Kleinschmidt, Kober, Lamb, Magruder, Mayfield, McLain, McLaughlin, E L Morgan, J D Morgan, Nash, Ober, Pool, Richardson, Smith, I S Stone, J M Toner and Woodward Fifteen new members were elected

Drs J Ford Thompson and S C Busey —Dr Thompson is dangerously ill from septic infection contracted from a cut while performing a complicated abdominal operation at the Garfield Hospital on the 29th ult Dr Busey sustained a fracture of the thigh and severe bruises on the 5th inst He was calling on a patient at one of the fashionable hotels and stepped through an elevator door which had been left open after the car had gone to the floor above and fell through the shaft a distance of fifteen feet, striking on a projecting portion of the gearing His friends throughout the medical world will be pleased to learn that he is improving rapidly and will recover from the injury

THE PUBLIC SERVICE

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from March 30, 1895, to April 5 1895

Lieut *Col* Joseph R Gibson *Deputy Surgeon General*, leave of absence granted on account of sickness, is still further extended six months on surgeon's certificate of disability

Capt William C Shannon, Asst Surgeon, is granted leave of absence for three months to take effect on the expiration of his present sick leave, with permission to leave the United States during May and June, 1895

Capt Rudolph G Ebert, Asst Surgeon relieved from duty at Ft Huachuca, Ariz, and ordered to Ft Columbus, N Y, for duty at that post

Capt Paul Shillock, Asst Surgeon, relieved from duty at Ft Wingate, N M, and ordered to Madison Bks, N Y for duty at that post, to relieve Capt Robert B Benham, Asst Surgeon Capt Benham, on being relieved by Capt Shillock, will report in person for duty at Ft Wingate, N M

The following named officers are detailed to represent the Medical Department of the Army as delegates at the annual meeting of the American Medical Association to be held at Baltimore, Md, May 7 to 10, 1895 Lieut Col Wm H Forwood, Deputy Surgeon General, Major Charles K Winne, Surgeon Major Walter Reed, Surgeon and Capt Harry O Perley Asst Surgeon They will proceed from their respective stations in time to reach Baltimore on May 7, and upon the adjournment of the meeting will return to their proper stations

The following named officers are detailed to represent the Medical Department of the Army as delegates at the annual meeting of the Association of Military Surgeons of the United States to be held in Buffalo, N Y, May 21 to 23 1895 Lieut Col Dallas Bache, Deputy Surgeon General Major Philip F Harvey, Surgeon Capt Daniel M Appel Asst Surgeon They will proceed from their respective stations in time to reach Buffalo on May 21, 1895, and upon adjournment of the meeting will return to their proper stations

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LECTURES

LECTURES ON INTRACRANIAL SURGERY

V—BRAIN TUMOR AND ITS SURGICAL TREATMENT

BY EMORY LANPHEAR, M D, Ph D
ST LOUIS MO

Operation for brain tumor is certainly an enticing one—the possibilities are so great The first inducement is the fact that the result from the expectant plan is invariably fatal, generally within two years, the sometimes wonderful changes apparently wrought by internal medication are deceptive—they do not prolong life, and this is believed by some to be true even of syphilitic intracranial growths A second incentive is that in most instances the almost exact *position of the neoplasm can be determined by the* well formulated principles of cerebral localization *And the third* is *that* in a *large* percentage of cases the growth is situated within reach of the surgeon's knife The objections to operative treatment are 1, the possibility of erring in the selection of the point for trephining, 2, the recurrence of the disease, and 3, the high mortality

While it is possibly true, as Agnew said, that "the results of operations for extirpation of brain tumors can not be considered *as particularly brilliant,*" yet from a study of the cases I have operated on and from the excellent results in the work of many other surgeons, I am compelled to agree with the statement of Bartlett, of Philadelphia, that "in the absence of any reliable cure for brain tumor, one is not justified in waiting long for results if the symptoms are such *as to enable him to locate the lesion,*" providing that it be accessible

As to the question of location, according to M Allen Starr, about one third of all cases occur in the basal ganglia, internal capsule, corpora quadrigemina, crura, pons and medulla, and so are inoperable Of the remaining two-thirds a considerable percentage *must* be amenable to surgical treatment In only four out of seventy two operations collected by Knapp, *the tumor* could not be removed In all the cases I have examined, in only one was I satisfied the growth could not be reached But even if one should err in attempting to locate the tumor and it should not be found, a large *opening in the skull and dura* will afford much temporary relief if the dura be not tightly sutured *and the* fragments of bone be not replaced Thus in *a* case *reported* by Fischer, *of Breslau*, *much* improvement occurred from such an operation And in one of double trephining by Kocher, of Berne, to relieve symptoms *when localization* was impossible (the only pronounced features being choked disc, deterioration of vision, headache and unsteady gait) an opening was made anteriorly in the frontal region *with* some bulging of the dura, and one posteriorly just below the tentorium cerebelli where a hernia cerebri formed which was removed by *a Volkmann's sharp spoon and the wound closed*, union by first intention was secured, four days after the operation the congestion of the discs had entirely disappeared *and sight had improved*, seven weeks after operation the general condition was much better than it had been, the gait was steadier, the headache gone, etc To be sure death ultimately resulted in both cases, but the patients were given a short respite and their final days rendered less painful

If the tumor can be located I believe the indications are to remove it even though it gives but transient relief Some cases have been *cured* beyond any question, and the cerebral functions, strange as it may seem, restored after removal of even large intracranial growths For example, Dr H H Mudd, *of St Louis, has reported* a case in *which* an immense echinococcus mass was removed from the brain of a girl 12 years old, the diseased mass being larger than a hen's egg and located in the motor region, reaching from the convexity to the lateral ventricles, after shelling out the tumor the wound was irrigated and the scalp sutured, the hole, large as it was, soon closed up and the motor disturbances disappeared, viz, the tremor *and hemiparesis accompanied* by hemianopsia and choked disc In one of my cases I removed a tumor springing from the dura, almost as large as the one just mentioned, and the brain tissue appeared so greatly altered that it seemed as if there never could be restoration of function, yet the symptoms entirely *disappeared in due time Bremer* explains the return of function after such colossal defects by the assumption that "the fibers of the corona radiata are not destroyed, but merely pushed asunder, though perhaps the myeline sheaths of these fibers are atrophied by pressure the more resisting axis cylinders preserve their continuity and so complete regeneration can occur"

Cerebral tumor is of much greater frequency than is generally supposed Many hundreds of cases have been recently published, Knapp, of New York, alone having compiled more than eleven hundred records of cases and this is a very incomplete report

The question of fatality is an important one, for while the patient knows *that death is inevitable* without operation, he is anxious not to have his days *cut short* by an ambitious surgeon, yet wishes to avail himself of any possibility of cure What are the chances of life and death? Of seventy-two cases operated on, according to *Knapp's* figures forty-one recovered and thirty-one died from the operation, in seven cases, (Horsley six, Knapp one) of trephining *for relief of* pressure alone there was no death The death rate in Knapp's statistics is 43 per cent, but this is much higher than would be shown by recent cases if collected The mortality under our present improved technique I place at about 30 *per cent*, and with increased experience we can reduce this Of twenty eight cases of trephining for deep intracranial troubles in my own work five died—a fatality of less than 18 per cent , while in my eight cases of tumor operated upon there were two deaths[1]—a mortality of 25 per cent While this looks like a formidable death rate it must be membered that nearly if not quite 100 per cent di hiected to operation

Most brain tumo syphilitic or tubercular—occurring or caseous masses respectively, the in young subjects Other forms mor osteomata, fibromata, gliomata, sarco mata, choleosteomata and cysts Tu in those just mentioned are very rare, ly cysts of the arachnoid, hydatids, plex rcomata, endotheliomata, etc , are met ed tables of Starr, Birch-Hirschfeld a give 1,098 tumors of which there were

Tubercl	371
Glioma	165
Sarcon	162
Gumm	69
Cysts	47
Carc	28
Glio	18

Myx mata, osteomata and other rare growt e list Special consideration of some ties is necessary before proceeding ussion of the general features of tur

These growths, if not very vascular, m d easily They are almost always f ay matter If thoroughly extirpated not probable and *all* symptoms may hus P Postemski, of Rome, on May 24, d to the Royal Academy at Rome a case he had successfully operated some ore, all the symptoms were gone and the (apparently) restored to health

mata —Fibromata, though rare, are always essible as they spring from the meninges, therefore be readily extirpated In the few ave been able to discover in recent literature, has been the result invariably

arcinomata —Carcinomata are not infrequently n the brain, they are attended with just as danger of return after removal as in any other of the body They commonly have a mass of eremic and softened brain tissue around the morgrowth, but in spite of this they may be cut ay, the adjacent tissue being cleaned out by a aquelin cautery Personally I have met but one ase of carcinoma of the brain, it was so extensive hat I did not dare remove it, and I believe it was good surgery to leave it untouched, though the patient lived less than six weeks

4 *Cysts* —Cysts are comparatively rare They can ordinarily be removed without difficulty, though in a case in the practice of Dr John Punton, of Kansas City, (reported in the *Kansas City Medical Index*, February, 1893) operated upon by myself there was not sufficient integrity to the cyst wall to allow of removal, the cyst was therefore simply opened and drained And experience of numerous operators has shown that opening and draining cerebral cysts gives almost as good results as does similar treatment in cerebral abscess

5 *Gummata* —Concerning syphilitic growths Horsley remarks ' Cerebral gummata should always be removed—iodid of potassium palliates but does not cure them"—a statement in which all who have studied the subject must concur The assertion of Agnew may be taken as especially applicable to this class of cases "The triumph already achieved by the conjoined labors of the neurologist and surgeon may be the harbingers of still greater ones in the future " I have operated twice for syphilitic intracranial growths —with two successful results One case which I saw in consultation with the late Dr J W Jackson, Chief Surgeon of the Wabash Railway system, gave all the characteristic signs of cerebral gumma, including choked disc, paralysis, etc , and *recovered* under the long-continued use of more than two ounces of iodid of potassium daily and prolonged residence at Hot Springs, Ark There is a possibility of a wrong diagnosis in this case, but I was sufficiently certain of the existence of the tumor and its location that I would have operated had consent been obtainable I believe yet, that operation would have been better treatment, for though several years have elapsed without any return of cerebral symptoms, there is quite a probability of trouble for this patient in the future

6 *Sarcomata* —Sarcomata found within the cranium are either of the spindle celled or myeloid varieties They may spring from the diploe, widely separating the tables and at last breaking through with much suffering, especially if the growth be directed inward In most instances they develop in the dura mater, the question of extirpation in such cases is of vital importance and is still undecided They frequently perforate the cranium and spread beneath the scalp, giving a distinct pulsation in the mass, reducibility when small and a characteristic sharp opening in the skull I believe excision to be the correct thing, the only question which arises being justifiability in advanced cases, and here the subcutaneous injection of the toxins of the streptococcus of erysipelas and of the bacillus prodigiosus, as advised by Colley, certainly should be practiced when extirpation is found to be impossible But increasing experience in cerebral operations and (particularly) observation of several cases of extensive destruction of the dura, lead me to the conclusion that we may safely remove a much larger portion of the dura than we are wont to believe I have taken away an area one and one-half by three and one-half inches without apparent ill effect If the scalp and periosteum can be brought over the hole in the skull so as to completely close it, the brain gets on very well—in certain parts of it at least. In view of which I am of opinion that operation for sarcomata might be successful in more cases than now reported were surgeons less saving of the dura, and even should permanent paralysis result, such a termination is far better than death from the neoplasm

7 *Osteomata* —Those concerning us in our study of cerebral surgery are of the inner table or diploe (enostoses) As a rule they are of slow growth and may be left alone, but if serious symptoms arise, as a displacement of the eyeball from osteoma of the frontal sinus, or indications of intracranial pressure, they must be removed

8 *Tubercle* —This is the form of tumor generally

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[1] One was a cyst of the arachnoid, with hemiplegia and imbecility, from the Indian Territory, referred to me by Dr O W Krueger The second, sarcoma of the dura from Dr J H Thompson of Kansas City Reports will be published later

found in childhood and is, it is asserted, the most frequent of all intracranial growths Dana says it is most often located in the cerebellum The tubercular tumor is usually irregularly round in shape and varies from one to two inches in diameter, of a grayish yellow color, not of itself vascular but frequently surrounded by inflamed or even softened brain tissue These growths are often connected with the central parts of the brain but are also not infrequently developed in the meninges in the parietal region In a fairly large percentage of cases they are within the safe area of surgical work

9 *Enchondromata, Lipomata, Angiomata and Neuromata* —These forms are all rare and demand no special consideration When accessible they are to be removed just as would be the case if situated in any other part of the body

SYMPTOMS

The importance of thoroughly understanding the symptoms of brain tumor can not be over estimated by the student, because the diagnosis as well as the location of the disease must be determined by a proper interpretation of even the most minute signs And the greatest diversity of symptoms can not but be noted in different cases, since the characteristics must vary according to the location of the tumor, its rapidity of growth and the age of the patient—so the physician must be careful not to be led astray It is my design to merely call attention to the most prominent features of the trouble as manifested by its development in different regions

Generally, when the lesion originates in the frontal lobes the patient first notices a headache which gradually becomes more intense and is persistent, later, the exacerbations assume an agonizing character Then follows stupor, disturbed sleep, loss of memory, and optic neuritis—sometimes with vomiting, these are associated with more or less pronounced psychical disturbances, *e g*, lack of judgment Yet the frontal convolutions belong to the "latent areas" and so sometimes very grave conditions may exist without marked manifestations[2] When the tumor has developed sufficiently to encroach upon the motor or speech areas, focal symptoms such as convulsions, paresis or aphasia are added With the pain there is some local tenderness of the scalp and cranium

When the tumor is situated in the mid-brain the symptoms are apt to be quite different There may be the same mental hebetude and tendency to stupor with occasional irritability or childishness, but in addition thereto there will be evidences of more or less profound irritation of the motor centers, yet strange to say, symptoms of interference with speech are not likely to arise when the tumor is located near the speech center, in fact, as a rule, disturbance of speech in cases believed to be tumor are to be regarded as pointing to the pons or medulla and the gray matter at the origin of the cranial nerves rather than to the speech center The peculiar disturbance of speech consists, in such cases, of a tendency to confluent articulation—that is, to run the syllables together Jacksonian epilepsy is the chief distinguishing symptom of brain tumor of the central region, when associated with choked disc a mistake in diagnosis is impossible, the tumor is situated at or near the center, presiding over that part of the body first involved in the spasm There is frequently a feeling of numbness or prickling in a particular spot preceding a general convulsive seizure—an *aura epileptica*—always felt in the same part, or a general convulsion may invariably begin with a contraction of a certain group of muscles, or the spasmodic contraction may be limited to a few muscles, without unconsciousness, the affected area increasing as the tumor develops Here diagnosis is easy, or at least such cases *always* demand exploratory trephining, and reference to the picture to be shown when discussing surgical localization—representing the various functions of the numerous gyri of the mid brain—will show the exact location of the lesion (tumor or other local disease) which can be readily determined by external measurement

Tumors growing in the posterior parietal region are commonly unaccompanied by marked symptoms until far advanced, though if the supramarginal gyrus be implicated there may be some disturbance of the muscular sense, and word-blindness may appear when the angular gyrus and the inferior lobule are involved In addition to these there will be the usual disturbances of consciousness and symptoms discoverable in the eye, presently to be mentioned

Tumors lying near the occipital lobes—so as to press upon or involve the cuneus and first occipital convolutions—give rise to homonymous hemianopsia, while if they exert their influence chiefly in the direction of the angular gyrus, word blindness may accompany the half vision, and if the parietal lobe be also implicated there may be added hemianesthesia and hemiataxia

Tumors located in the temporal area can not as a rule be diagnosticated (or at least the situation decided upon) The exception is that if the neoplasm be in the left hemisphere and affect the posterior part of the first and the upper posterior part of the second temporal convolution, word deafness will be a symptom which will correctly indicate the point to be exposed by operation

Tumors of the corpus callosum and of the opticostriate region present a slowly progressive hemiplegia in addition to general pressure symptoms, and are beyond reach

Brain tumor may give a slow and soft pulse from the general intracranial pressure, or from irritation of the vagus center

Disturbances of consciousness have already been alluded to, but deserve further consideration In tumors which grow with great rapidity the stupor or mental hebetude may speedily develop into coma, but in cases more inclined to chronicity a condition of semi-stupor is frequently a prominent symptom—suggesting thrombosis and hence not characteristic of tumor, deep stupor or even coma is quite common in the last stages when the surrounding cerebral substance is becoming softened, or when an anemic condition of the brain is produced by pressure on important blood-vessels or by their involvement by disease progression In such cases the eye symptoms in conjunction with the peculiar mental trouble will enable the physician to recognize the character of the trouble But in the earlier stages a different kind of stupor is occasionally met, not dependent upon severe structural changes in parts of the brain other than those immediately involved in the growth, in which cases the somnolent condition is due to general cerebral hyperemia, it may or may not be associated with general convulsions It is liable to appear suddenly, disappearing in a few hours, or it may continue for several days and then subside gradually Wood records a case of glioma of the brain in the history of which he says "He had been for some days absolutely comatose, passing his discharges involuntarily and was thought to be dying, a few hours later he walked to the clinic room in a distant part of the hospital"

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[2] Illustrating this point I may mention a case in which I evacuated an abscess involving a large part of the frontal lobes, yet there was no evidence of mental disturbance save a tendency to somnolence

As already observed, the cranium may be sensitive to pressure as elicited by a gentle stroke of the finger or percussion hammer, or even to pressure with the fingers The latter I have noted in a number of cases, it corresponds to a circumscribed pachymeningitis with more or less osteitis and is generally indicative of a lesion accessible to the knife

Migraine is sometimes a symptom of brain tumor, it comes on as a unilateral headache, with intervals of extreme variability accompanied by disturbances of the stomach, tinnitus aurium, considerable dilatation of the pupil of the affected side, in the interval there is apt to be quite an amount of headache, non-migrainous in character

Chief among the symptoms of brain tumor are those connected with the eye—in fact not at all infrequently the patient first learns of the existence of any head trouble upon consulting the oculist for *disturbance of vision* Tumors located at the base of the brain or at the posterior end of the internal capsule or about the optic thalamus—all beyond the possibility of surgical treatment—give rise to most marked interference with sight, while the same is true if they affect the occipital lobes, the manifestations peculiar to tumor situated in the last named region, are such as to enable us to positively locate the disease Disturbance of the cortical cells of the cuneus, for example, gives a blindness of the outer half of the retina of the same side and the inner half of the opposite side, but if there be homonymous hemianopia *with motor paralysis of only one eye*, according to Noyes, the location can not be determined

"Nystagmus, unilateral or double, permanent or temporary, exhibiting itself with other convulsive or paralytic symptoms, indicates cephalic lesion In general, this will be at the base or on the convexity behind the fissure of Sylvius (region of the angular gyrus) In the former case (when at the base) it will be complicated with paralysis of the motor nerves of the eye or of the optic nerve, in the latter case (when at the convexity) there may be epileptic attacks, hemiplegia, etc, but we can not always venture on an exact localization" (Robin.)

Mydriasis, moderate in degree, may be due to intracranial pressure acting as an irritant to the pupil-dilating center, according to Raehlman, though Leber claims that the mydriasis is sometimes a true paralysis

Papillitis is frequently associated with brain tumor, generally with dominant infiltration (choked disc) Both optic nerves are commonly affected when the inflammation is due to intracranial growths, though cases of one-sided neuritis have been recorded in undoubted brain tumor, notably cases of Reich, Hughlings Jackson, Pooley, Parinaud and Gowers—in each of which the tumor was upon the side opposite to the papillitis, but usually monolateral papillitis is a condition dependent upon some local cause in the orbit, erysipelas, etc, while bilateral papillitis will nearly always be found to be due to a tumor in the brain when it can not be traced to injuries of the skull or meningitis—conditions easily recognizable under ordinary circumstances Cerebellar tumors particularly, tend to the development of papillitis, and the tumor need not be larger than a small cherry to cause the ocular trouble—so say Reich, Edmunds and Anneske It most often appears late in the disease, indeed most authorities regard its onset as an indication that death will close the patient's existence within a few weeks unless operation is resorted to, but Matthewson has recorded a remarkable case in which it persisted for three years Choked disc, then, may be regarded as an almost unmistakable evidence of the existence of an intracranial neoplasm, though exactly how it is produced is still an undecided question Gowers says "Distension of the sheath may perhaps intensify the process otherwise set up, leading to retention or augmentation of fluid in the lymphatic spaces in the nerve fluid which may in some cases possess an irritative quality" In 1881, Leber suggested that the fluid coming down the sheath provokes the trouble by its chemically irritating properties, and Deutschmann in 1887 injected the bacillus tuberculosis into the cranial cavity of rabbits producing papillitis and vaginal distension, while with innocuous fluids no results followed, as a deduction he maintains that the trouble originates in transmission of pathogenic elements from the neoplasm and that intracranial pressure has little or nothing to do with its production—the latter clause being in entire accord with the belief of almost every prominent ophthalmologist Picque advances the idea that the trouble is due to the accompanying meningitis, the inflammation being transmitted to the papillæ by continuity of tissue, the intervention of "germs" being unnecessary—a theory supported by the fact that papillitis does not appear until very late in the history of deep tumors, not until the meninges are involved

Atrophy of the optic disc may also be due to tumor, but not more than one-fourth of the cases—says Noyes—originate in this cause, so its significance is not so great as choked disc However, it should always be looked for in making a diagnosis

Hemianopia is usually not a localizing symptom of tumor for reasons already stated, yet it is a valuable factor in the problem of determining whether or not a tumor is operable I quote from Seguin "Lateral hemianopia with hemiplegia (spastic after a few weeks), aphasia (if the right side be paralyzed), and little or no anesthesia is quite certainly due to superficial lesion, implicating the motor zone and the gyri lying at the extremity of the fissure of Sylvius, viz, the inferior parietal lobule, the supramarginal gyrus and the gyrus angularis Lateral hemianopia without motor or common sensory disorder, or any other accompanying symptoms, is due to a lesion of the cuneus only, or of it and the gray matter immediately surrounding it, on the mesial surface of the occipital lobe opposite the dark half-fields Lateral hemianopia with loss of power in one-half of the body, especially if associated with impairment of the muscular sense, is dependent upon a lesion in the inferior parietal lobule and gyrus angularis with their subjacent white substance, penetrating deeply enough to sever or compress the optic fasciculus on its way posteriorly to the visual field" The existence of any one of the groups of symptoms indicates surgical interference There are many more symptoms of interest to the neurologist, but none, so far as I know, that can be of use to the surgeon, excepting a few which concern cerebellar tumors, these will be mentioned in the next lecture

(To be continued)

ORIGINAL ARTICLES

THE ARMY MEDICAL MUSEUM AND THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE

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WASHINGTON D C

The Army Medical Museum, which has now a world-wide reputation, had its beginning during the Civil War Surgeon General Hammond, in a circular published in May, 1862, announced the intention of establishing an Army Medical Museum, and requested medical officers to collect specimens of morbid anatomy, medical and surgical, which might be regarded as valuable, together with projectiles or foreign bodies removed and such other matters as might prove of interest in the study of military medicine and surgery Later circulars gave more explicit instructions regarding the collections to be made, and in a short time thereafter an immense amount of material illustrative of gunshot fractures and the lesions of camp diseases was sent to Washington from the field and general hospitals throughout the country The work of preparing, arranging and cataloguing these specimens was carried on actively under the superintendence of Surgeon J H Brinton, U S Volunteers who was the first curator, and in April, 1867, the museum was opened to the public in the Ford's Theater building in which two years prior to this, President Lincoln was assassinated At the same time a small number of copies of an illustrated catalogue was printed for use in the museum and for exchange with other museums and scientific bodies The entire number of specimens then catalogued was 8,542 At this time also the museum and library received official recognition from Congress by the authorization of certain expenditures in their behalf among the miscellaneous expenses of the Medical Department

The value of a printed catalogue to a museum is very great, as it is by its means that the collection is made available to scientific students, the majority of whom can not personally examine the specimens, and by diffusing a knowledge of the contents of the museum it leads to voluntary contributions to the collection A full catalogue of this museum is a want that has long been felt Partial lists have been published at times, as in 1876 a check list of the preparations and objects in the section of human anatomy for use during the International Exhibition, and in 1880 a list of the anatomic specimens for distribution among army medical officers and anatomic students and correspondents The Surgeon General has on several occasions urged the publication of a catalogue, in 1873 and again in his annual reports for 1886, 1887 and 1888 His want of success on these occasions no doubt accounts for the fact that no effort has been made recently in this direction It is unnecessary to speak of the practical utility of the museum in these columns, for medical men can easily appreciate this To Army medical officers it affords a field of study indispensable to the acquirement of the fullest knowledge of the special duties required of them The illustrations of military surgery and camp diseases contained in it have greatly promoted general professional knowledge on these subjects, and woodcuts of many of its specimens have found their way into works on military medicine and surgery There is no doubt, however, that the educational value of the collection would be greatly enhanced by the publication of an illustrated catalogue Much of the material for such a catalogue is already on hand

As a knowledge of the existence and scope of the museum became diffused, many of the officers of the Army outside of those belonging to the medical department, and practitioners in civil life, sent contributions to it, so that the Surgeon General was no longer able to speak of "the pardonable pride which he took in the reflection that this important collection had been accumulated through the unaided zeal and industry of the medical officers of the Army" Army officers sent specimens of natural history, stone implements and other objects of archæological interest, all valuable as objects of exchange with other museums, while civilian practitioners sent specimens more strictly pertaining to the province of the Army Medical Museum Exchanges have been made with the Smithsonian Institution, the Agricultural Department, the Museum of the College of Physicians, Philadelphia, of the New York Hospital, the Peabody Museum at Cambridge, Mass, the Blackmore Museum in England, the Anatomical Collection at Oxford, England, etc To the energy and ability of Drs Woodward and Otis, both of whose too short lives were mainly devoted to the building up of the Army Medical Museum and to professional work associated therewith, the Army Medical Department and the medical profession owe the successful issue of an undertaking which is now a credit to the country

The Army Medical Museum was housed in the old Ford's Theater for over twenty years The building was utterly unsuited for this purpose, even had the whole of its space been available for the display of the specimens As it was, the museum was confined to the third floor, lighted mainly by skylights, the library being packed two and three rows deep on the shelves of the floor below, while the Hospital Records of the Civil War, with the clerks at work on them, occupied the ground floor The growth of the museum, and particularly of the library during these years manifested the inadequacy of their quarters In time there came to be no room for even the storage of books and specimens, not to speak of facility of reference or advantageous display Moreover, the danger from fire was considerable, although the best care was taken by the officer in charge to prevent such a calamity The building was closed in on three sides by inflammable tenements and sheds on property over which this officer had no control Besides, the weak walls of the theater, which were cracked and markedly out of plumb on the east, suggested that in case of fire there would be an utter destruction as the walls would assuredly fall A fire in 1875 in the adjoining buildings emphasized the danger to which the library and museum were exposed and recalled how the Smithsonian Institution suffered in 1865 The damage to the Patent Office in 1877 increased the anxiety for the safety of the collections in the Ford's Theater building so that in

1880 the President of the United States considered the subject of such importance as to embody a recommendation for a fireproof building in his message to Congress He said

> "The collection of books, specimens, and records constituting the Army Medical Museum and Library are of national importance The library now contains about fifty-one thousand five hundred (51,500) volumes and fifty-seven thousand (57,000) pamphlets relating to medicine, surgery and allied topics The contents of the Army Medical Museum consist of twenty-two thousand (22,000) specimens, and are unique in the completeness with which both military surgery and the diseases of armies are illustrated Their destruction would be an irreparable loss not only to the United States but to the world There are filed in the Record and Pension Division over sixteen thousand (16,000) bound volumes of hospital records, together with a great quantity of papers, embracing the original records of the hospitals of our Armies during the Civil War Aside from their historical value, these records are daily searched for evidence needed in the settlement of large numbers of pension and other claims, for the protection of the government against attempted frauds, as well as for the benefit of honest claimants These valuable collections are now in a building which is peculiarly exposed to the danger of destruction by fire It is therefore earnestly recommended that an appropriation be made for a new fire-proof building, adequate for the present needs and reasonable future expansion of these valuable collections Such a building should be absolutely fire-proof, no expenditure for mere architectural display is required It is believed that a suitable structure can be erected at a cost not to exceed two hundred and fifty thousand dollars ($250,000)"

A bill authorizing the construction of a fire-proof building passed the Senate in 1883, and was favorably reported from the proper committee to the House of Representatives, but no final action was reached at that session Ultimately, March 2, 1885, an appropriation of $200,000 was approved, but as the original plans were based on an estimate of $250,000 many changes had to be made involving a reduction in size and the omission of ornamentation The site selected was in the Smithsonian grounds where they are traversed by Seventh Street, having as its neighbors on a line westward the National Museum, the Smithsonian Institution, the Agricultural Department and the Bureau of Engraving and Printing The museum was opened to the public in its new quarters in February, 1888 On June 30, 1894, it contained 32,269 specimens, of which 12,249 were pathologic, 4,376 anatomic, 1,717 illustrative of comparative anatomy, 12,033 microscopic and 1,894 miscellaneous

While the success of the museum was assured almost from the first by the inflow of specimens from the hospitals of the Civil War, the progress of the library was slow in its earlier years, and but for the unremitting care and able management of Dr John S Billings it would certainly have succumbed to some of the many accidents and harmful influences that are prone to assail the infancy of such undertakings

The nucleus around which the library has been crystallized was the few books of reference and text-books on medical subjects that had gradually accumulated in the rooms of the Surgeon-General's office A catalogue published in 1865 contained the titles of only 1,800 volumes As stated above, in 1867, certain expenditures were authorized for the library out of the appropriation for the miscellaneous expenditures of the Surgeon-General's Office Since then, both the library and museum have met with kind consideration at the hands of the Appropriation Committee, the usual sum carried by the Army Appropriation Bill for the former being $10,000, for the latter $5,000 For the current year, however, the sum for the library was reduced to $8,000 One of the first special efforts of the librarian was to make the library as complete a storehouse of American medical literature as possible To this end he collected and perfected the files of all the medical journals published in this country since 1798, making an index on cards of the subject titles of all the original articles found in them, for the convenience of those who desired to consult the literature of any special subject The articles in current medical journals and volumes of transactions were indexed on reaching the library, and the work of completing a card index for all the volumes already accumulated was carried on as steadily and rapidly as was permitted by the clerical aid available for the purpose

An alphabetical catalogue of authors was published in 1874, when the library contained about 25,000 bound volumes and 15,000 pamphlets It was then the largest medical collection in this country Its records show the friendly interest that was taken in its progress and work by physicians in all parts of the country, and testify that even then it succeeded in a most satisfactory way in meeting all the demands made upon it

In 1887 the work of cataloguing the original papers in medical journals and transactions was completed for all that class of literature that the library then contained, and the classifying of the titles under the proper subject headings and combining them with the titles of books to form a complete index to the collection was also effected During the previous year some copies of a specimen fasciculus of a proposed Index Catalogue were printed and distributed, in order to obtain the opinion of those competent to judge whether it was desirable that such a work should be published, and if so, to elicit criticisms and suggestions as to the form of catalogue that would be most acceptable and useful The responses, consisting of letters, resolutions of societies and editorial and critical notices, were numerous and not only favorable to the general plan as proposed, but unanimous in the expression of the opinion that the whole work should be published as soon as possible, it being regarded as of the utmost value to medical writers and teachers not only of this country but of the world Congress acted favorably on the proposition, and the result is that to-day the medical profession is enriched with a magnificent set of volumes of author and subject titles in a single alphabetical series which will shortly be completed by the issue of the last, the sixteenth volume The first was issued in 1880, and every year since then, until last year, one volume was added to the set The completed catalogue will contain about 170,000 author titles, the same number of subject titles of books, and about 525,000 subject titles of pamphlets

When the first volume of the Index Catalogue was published the library contained 51,500 bound volumes and 57,000 pamphlets Since then the number of bound volumes has been more than doubled and of pamphlets much more than trebled The early volumes of the catalogue therefore show only one-half, or less than that, of the present wealth of the library To remedy this, Congress has shown its appreciation of the work by authorizing the issue of a second alphabetical series, supplementary to the first, which will probably be completed in five volumes similar in size and style to those already issued Meanwhile, as supplementary to the catalogue, the sixteen volumes of the "Index Medicus," edited by Dr Billings and his learned collaborator, Dr Robert Fletcher, have been of the greatest value to the literary workers of the medical profession It is greatly to be regretted that this monthly exponent of the progress of medical science may possibly die for want of financial support Its condition has recently been noticed extensively in the medical journals As its continuance is of importance to the whole medical profession, the present writer does not see why it should not be in order for the AMERICAN MEDICAL ASSOCIATION to come to its rescue and continue its publication from the office of the JOURNAL In this way any financial loss would be generally distributed among those directly or indirectly benefited

The Index Catalogue has given a wonderful impetus to medical literature and education in this country, as it has placed the valuable stores of the library within easy reach of those who are qualified to make use of them Formerly, when any one desired to become acquainted with the knowledge already acquired by the profession on some special subject, he frequently gave up the effort at the outset as he appreciated the difficulties and oftentimes the impossibility of gathering together the various articles already published on the subject The bibliography appended to a journal article was often to students of the subject the most valuable part of a contribution Now, all this is changed The student has merely to turn to the Index Catalogue and the desired literature is before him, with many hints to guide him in the selection of the volumes that bear especially on his inquiry The volumes themselves may be obtained by applying through the custodians of public libraries, and in some cases books that can easily be replaced have been sent direct to the applicant on the deposit of a sum sufficient to cover their market value

It has, however, been found needful recently to impose some restrictions on the loaning of books, particularly of standard authorities and volumes of journals that are in constant demand As the number of readers in the library has increased, it has more frequently happened that requests for certain volumes could not be complied with on account of their absence on loan The interests of those who come to the library to prosecute their studies should not be sacrificed for the sake of those who ask the library to come to them To be able to accommodate both parties, Dr Billings is endeavoring to procure duplicates of those standard works, journals and transactions that are in general request Moreover, the wear and tear of years of use is beginning to tell on many of these and to render their duplication needful Contributions of the character indicated would therefore be of much value, and the writer of these lines trusts that those who have read thus far will make a note of this and aid the library in this desirable extension of its field of usefulness Its friends need have no hesitancy in duplicating works already on hand, as the spare copies can always be made of use in effecting exchanges

It is time, however, to say a few words concerning the present quarters of the library and museum The building is of red pressed brick, E-shaped, and severely simple in style The main building fronts on B Street, the wings project into the mall This is a mistake, as all the other public buildings in the vicinity front on the park Hereafter when it becomes needful to enlarge the establishment this mistake will no doubt be rectified The main building is 125x55 feet, the wings each 60x131 feet Under both is a basement eleven feet high which affords magnificent storage rooms

The ground floor is traversed by a central corridor, clean, white smooth and unadorned, on either side of which are doors leading into rooms of various sizes On the western or left side of the entrance are rooms occupied by clerks of the Record and Pension Office of the War Department On the right are the lecture rooms and sanitary laboratory of the Army Medical School, the work room of the pathologist and the chemic laboratory where guard is kept over the purity and strength of the medical supplies furnished to the Department One of the rooms on this floor is given up to specimens of syphilitic disease unsuited for display in a museum open to all comers, another has been fitted up recently with various forms of stretchers, wheeled litters, cacolets, travois and other means of carrying sick or wounded men Opposite the entrance a wide stairway of iron, carpeted with thin rubber, makes a semi circular sweep to the second floor The corridor of the main building on this floor opens on the west into the museum hall and on the east into the library, the rooms on either side being used by the clerical force of the latter One large room adjoining the library is fitted up as a reading room for those making personal use of the books, and has on its shelves such works as are in every day request The floors throughout the building are of brick between rolled iron sheeting

The rooms on the third floor are occupied by those connected with the work of the museum The bacteriologic laboratory on this floor is well outfitted and has an excellent northern exposure for microscopic work Such of the attics as are not required for photographic work are used as storerooms

The whole of the eastern wing from the second floor level to the roof is occupied by the library This fine hall, thirty-one feet to the eaves and forty-seven feet to the ridge, is lighted by high windows and skylights in the risers of the ridge The south end of the hall near the entrance from the corridor presents a large floor space which supports only a few desks, chairs, revolving book stands and large tables for the convenience of visitors in consulting atlases and other large works of reference On three sides the whiteness of the walls between the window spaces is relieved by large oil paintings of some former Surgeon-General of the Army,—Tilton, Lovell, Lawson, Finley, Barnes and Crane, with portraits also of Bichat, John Hunter, Morton and Physick, and many photographs and engravings On the fourth, the north side, this clear space is closed in by what looks at first sight like a solid wall of books in red leather bindings On closer inspection the wall becomes resolved into a three storied framework of perforated iron, each story seven and a half feet high and extending along the length of the wing to its northern wall Narrow iron stairways permit of communication between the stories and narrow corridors between the sections of the structure, each section being fitted with adjustable shelves of hard oak, filled with books or with file cases containing pamphlets The estimated capacity of the library is 179,000 volumes On June 30 of last year there were supported on its shelves 114,567 bound volumes and 183,778 unbound pamphlets and papers The former comprised 72,090 medical works, 33,297 volumes of medical journals, 4,913 of transactions of societies, 1,663 of theses and 2,604 of pamphlets The latter consisted of 56,218 theses and 127,560 pamphlets The binding of these into volumes depends on the means available In 1893, 630 pamphlets were bound into 128 volumes and last year 2,802 into 343 volumes

These books are all devoted to medicine and its collateral branches No purchase is made for the library of books belonging to general or miscellaneous literature It has all the costly illustrated medical works and anatomic atlases It has also a valuable collection of the medical classics and a number of the rarities and curios of medical literature, but the aim has ever been to make it a storehouse of the medical thought of the present day rather than a collection of works that are of interest only from a historical point of view The library is by far the largest of its kind in the world This is gratifying to us, but we can take a much greater pride in the thought that of all such libraries it is the one which is most available for and most used in the current work of medical progress

The museum hall in the west wing has a floor and cubic space equal to that of the library, but the two halls differ widely in general appearance The contents of the museum are disposed in open order as contrasted with the compact shelves, tiers and sections of the library The specimens are arranged in glass show cases, each about twelve or thirteen feet long, two and one-half feet wide, and eight feet high, which project into the body of the hall from the side walls, but with ample space for light and movement between adjacent cases On the third floor level is a gallery which projects beyond the ends of the show cases below, but does not interfere with the light from the skylights in the ridge The gallery is reached by a stairway at each end of the hall, as well as by a door opening from the corridor of the third floor of the main building Some flags are draped from the face of the gallery, conspicuous among which is the hospital flag of all the armed nations of the world, the Red Cross of the Geneva Treaty

The first thing the visitor must do on entering this hall is to record his name on the visitor's book In 1893, 85,000 persons did this, last year 50,000 Most of these were merely sightseers, but the interested and appreciative student is always among them

One would suppose that when over 32,000 specimens are the subject of inspection and report, it would be difficult to select the materials for a short journal article concerning them, but a very brief examination of the hall shows that the system adopted in the display enables the observer not only to appreciate the museum in its entirety, but to select the case in which he will probably find some particular object of his search

The center of the floor space has along its length a number of flat-topped glass cases in which are displayed surgical instruments of all kinds, but in particular those intended for military service Various miscellaneous objects are also on exhibit here The series of microscopes is one of much interest as showing the evolution of the instrument from its earliest days Models of military hospitals, hospital trains and steamboats bring to mind the busy days of the Civil War, while near by are tube cultures of the various bacteria the study of which has had such a wonderful influence on the progress of surgery since those times of active service A fine series of urinary calculi, models of the common and harmless and of the poisonous mushrooms, and life-size models of the anatomy of the horse are prominent among the objects displayed, as are also a collection of medical medals and a series of delicate longitudinal and antero posterior sections of the human embryo prepared by Dr Wm M Gray, the microscopist of the museum

It is, however, in the display cases projecting from the side walls that the systematic methods of the museum are seen to the best advantage In illustrating any part or organ of the human body its normal development is shown first and then the abnormal deviations that are occasionally found, with specimens from the domain of comparative anatomy that throw light on the deviations These are followed by illustrations of its anatomy and physiology, and lastly of the diseases and injuries to which it is specially subject The cases are numbered in arithmetical sequence Case No 1 and those immediately following it contain specimens illustrative of the organism as a whole, beginning with the formation of the ovule in the ovary, following its progress to the formation of the embryo in the uterus, and thereafter showing the gradual development of the latter, with many side lights on the subject from comparative embryology The abnormal developments are then shown, such as hydrocephalus, spina bifida, extroversion of organs and various monstrosities Next come the anatomy and physiology of the perfected system, and then illustrations of general morbid conditions such as tuberculosis, cancer, septicemia, syphilis, alcoholism, fevers, etc, and lastly general injuries, as from crushing, explosions, and exposure to heat and cold The various anatomic regions and organs are then taken up, one after the other, and each has its medical connections illustrated by specimens showing its development abnormalities, anatomy, physiology, morbid conditions and injuries

In the gallery is a series of show cases, like those below, in which are exhibited the missiles, weapons, fractures, excisions, amputations and other specimens of the war In fact, the museum of the old Ford's Theater building may here be recognized, while that on the floor of the hall is relatively a new institution The gallery contains also many specimens of comparative anatomy, a magnificent collection of skeletons and crania, some frozen sections of the brain and dissections of other parts of the body preserved in alcohol, and many beautiful wax models of diseases of the skin

It is, however, so difficult to convey a well defined idea of the wealth of the museum by mere written words that this article had better be closed with the suggestion that the members of the ASSOCIATION take advantage of the meeting in Baltimore to come to Washington and inspect for themselves

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THE forty sixth annual session of the AMERICAN MEDICAL ASSOCIATION will be held in Baltimore, Md, on Tuesday, Wednesday, Thursday and Friday, May 7, 8, 9, and 10, commencing on Tuesday, at 10 A M

Blank Applications for membership in the ASSOCIATION at the JOURNAL office

THE MEDICAL TREATMENT OF CANCER OF THE LARYNX

Read by invitation before the Philadelphia Chapter of the Alumni Association of the Jefferson Medical College March 12 1895

BY E L VANSANT M D

ADJUNCT PROFESSOR OF DISEASES OF THE THROAT AND NOSE IN THE PHILADELPHIA POLYCLINIC SURGEON TO THE THROAT NOSE AND EAR DEPARTMENT OF THE HOWARD HOSPITAL PHYSICIAN TO THE PHILADELPHIA HOSPITAL

The medical treatment of carcinoma of the larynx, with our present knowledge is necessarily a palliative one. Still, efforts to find some drug or method of treatment that would retard or cure the malignant growth have been unceasing. Among the many remedies that have been so used may be mentioned arsenic, iodoform, ergot, mercury, sulphide of calcium, tincture of thuja occidentalis (arbor vitæ), chian, turpentine and condurango. Injections of pyoktanin or the anilin colors and, more recently, a 2 per cent solution of carmine, dissolved in a 3 per cent solution of soda. None of these have, however, stood the test of time and, although some of them do much good in improving the systemic condition and alleviating some of the symptoms, still no purely medicinal treatment has, as yet, been proved to be of curative value.

A plan of treatment that perhaps deserves fuller mention is the comparatively recent one with the toxins of erysipelas, either used alone or in combination with the toxins derived from the bacillus prodigiosus.

This treatment, which originated from clinical observations of the antagonistic action of accidentally acquired erysipelas upon malignant growths, lupus and syphilitic lesions, has been considerably experimented with, and a number of favorable results in cases of inoperable malignant growths have been reported. In the early trials of this treatment, the plan adopted was to excite an artificial erysipelas in the vicinity of the growth by making inoculations of the erysipelas streptococci. It was found, however, very difficult to produce an erysipelas by such inoculations, nor was the danger attending an attack of erysipelas a slight one. I need hardly call your attention to the fact that erysipelas of the larynx is so grave a disease, that for this form of cancer at least, such treatment would be reprehensible.

Further experimentation developed the fact that injection of the toxins derived from bouillon cultures gave quite as good results as inoculation with the living cultures, and further, that the activity of such toxins was greatly augmented by adding toxins derived from cultures of the bacillus prodigiosus.

I will not dwell upon the laboratory methods by which such toxins are obtained. At first the germs were developed in separate bouillon cultures, then filtered, a small quantity of thymol crystals being added to the filtrate, which was kept in a cool dark place until used. Later the streptococci were allowed to grow for ten days, then the bacillus prodigiosus added, and allowed to develop two weeks longer, the filtrate from this mixed culture being used. Still later, the cultures instead of being filtered were subjected to a sufficiently high temperature (58 degrees C.) to kill the germs, though not high enough to produce much chemic change in the toxalbumins. The injection of the products from this last-mentioned method are said to have a better effect than when the cultures were filtered.

Treatment by these double toxins is now carried out by the hypodermic method. In a recently published case,[1] 15 minims of a solution were injected every other day, and the dose gradually increased to 40 minims. The injections may be made into the arm, leg or buttocks, and produce local redness, swelling and pain which may persist from twelve to twenty-four, or even thirty six hours. The temperature after each injection usually rises, and may reach 103 to 105 degrees F. Nausea, chill and vomiting at times follow the injections.

This treatment has now been applied to a number of cases, and the reported results in some of them have been marvelous, the injections being followed by rapid breaking down and disappearance of the humors, and, although a large per cent of even the greatly improved cases have recurred, still a few seem to have been permanently benefited.

I have not been able to find any record of carcinoma of the larynx treated by this method, but several cases of sarcoma involving the tonsils, palate and part of the larynx have been reported as successfully so treated, the growth largely disappearing, and the general condition of the patient greatly improved.

For much of our recent information, and for most of the experimentation with this treatment in this country, we are indebted to Dr William B Coley, of New York, who has formulated the following conclusions in regard to it.[2]

1 The curative action of erysipelas upon malignant tumors is an established fact.

2 This action is much more powerful in sarcoma than carcinoma.

3 This action is chiefly due to the soluble toxins of the erysipelas streptococci, which may be isolated and used with safety and accuracy.

4 This action is greatly increased by the addition of the toxins of bacillus prodigiosus.

5 The toxins, to be of value, should come from virulent cultures and should be freshly prepared.

6 The results obtained from the use of the toxins are so nearly, if not quite, equal to those obtained from an attack of erysipelas that inoculation should rarely be resorted to.

In spite of the very favorable opinion of the curative action of erysipelas upon malignant tumors, expressed by Dr Coley, it is my conviction that, as yet, the results of the erysipelas treatment are not sufficiently successful to warrant its preference in laryngeal cancer, over early and thorough surgical procedure, and that at present its use should be restricted to cases that may be termed inoperable.

The medical treatment of laryngeal cancer being then largely a palliative and symptomatic one, we will consider the treatment of the different symptoms, and when we reflect that so many of the cases when seen by us are inoperable, and that a large per cent recur after operation, it will be seen that such symptomatic treatment is of the greatest importance. By it we may, at least, hope to alleviate the patient's suffering and prolong his life.

For the purpose of better considering the medical treatment, I will divide the cases of cancer of the larynx into two classes or groups. The first class comprises those cases beginning at some point outside of the larynx proper, it may be the tonsils, base of tongue, pharynx, esophagus, or even the thyroid gland, and then later extending into and involving the larynx, such cases are termed extrinsic or pharyngo laryngeal The second class will comprise those that begin within the larynx itself and are termed intrinsic or endó-laryngeal

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[1] New York Medical Record No xlvi 1894

[2] The Journal of Laryngology Rhinology and Otology, vol ix, No 1, page 51

In the first class, the pharyngo-laryngeal, painful and difficult deglutition, slobbering of saliva, and pain, which also radiates to the ear, are apt to be the earliest and most urgent symptoms, while dyspnea, loss of voice, cough, etc, may not be present until late in the course of the disease

In the second class, the endo-laryngeal, dyspnea, dysphonia and cough are apt to be the first symptoms, and dysphagia may not occur until the growth extends to the surrounding parts

As regards the treatment of dysphagia, if ulceration be present, treatment addressed to the healing of such ulcers is indicated This will consist of careful cleansing of their surfaces by means of antiseptic washes or by swabs moistened with disinfecting and cleansing solutions, such as hydrogen dioxid, weak solutions of carbolic acid, permanganate of potash, etc After thorough cleansing, the surface of the ulcers may be touched with nitrate of silver in solution, or dusted with iodoform, calomel or other detergent powders Recently I have had good results from the use of acetanilid, with it not only have the ulcerated surfaces been reduced in size, but considerable relief from pain has been obtained Cleansing the throat with warm alkalin sprays or washes, and applying solutions of cocain, by means of sprays or swabs some five to ten minutes before eating, will often so relieve the dysphagia, that the patient may enjoy a fair meal We begin preferably with a weak solution of the cocain, say 2 per cent to 4 per cent, and increase the strength of the solution as found necessary, frequently we must resort to solutions of 10 per cent or even stronger in order to obtain the desired local anesthetic effect

Insufflation of morphin, or morphin mixed with the subnitrate of bismuth, powdered starch or other such excipients will give some relief from pain and permit of swallowing Dusting the throat with powdered formanilid or swabbing with a 10 per cent to 20 per cent solution of the same is said to produce a considerable local anesthesia which is quite lasting[3] At times it will found necessary to resort to rectal feeding, the patient not swallowing anything but the necessary fluid Rest thus given to the throat for a few days, especially when associated with appropriate local treatment, may greatly relieve the dysphagia

A procedure that I have frequently advised, and which is usually attended with marked success, is for the patient to place a glass of milk or broth on the floor, or upon a low stool, and then lying prone upon a lounge to suck the fluid up through a tube At times the patient has found that by sitting in a chair and placing the glass upon the seat of a chair in front of him, he could by leaning forward swallow the fluid through a tube very comfortably With the appearance of dysphagia the patient should confine his diet to semi solid and fluid foods Efforts to continue the deglutition of solids will lead to increase of the difficulty, and hasten the tending to the inflammation and ulceration Food should be predigested by the addition of peptonizing powders Peptonized milk is especially useful Raw eggs can usually be swallowed even when the dysphagia is severe Sucking of ice pellets is grateful to the patient The use of the esophageal tube for feeding is attended with the danger of accidentally perforating the esophagus, and if resorted to, should be used with great care In cases involving chiefly the tonsils and base of tongue, feeding through the nose may be practiced, peptonized fluids being passed to the back of the pharynx through tubes introduced through the nostrils

Dyspnea as a symptom is usually an early one, particularly so in the endo-laryngeal cases, and even in the pharyngo-laryngeal group may be noticed before dysphagia For the treatment of this symptom, rest will be found to be of great value, for even comparatively slight exertion greatly increases the embarrassment to the breathing At times the dyspnea is associated with and chiefly due to the accompanying edema of the glottis Here applications of a 20 per cent oily solution of menthol, inhalations of steam vapor medicated with benzoin, chloroform, menthol, etc, may be used Scarification of the edematous parts with the laryngeal lancet should not be delayed, but should be performed early, such scarification may be followed by endo-laryngeal application of menthol solutions, inhalation of medicated vapors, the continuous use of the cold coil around the neck, and the administration of pilocarpin as necessary

When the dyspnea is due to mechanical obstruction caused by the growth, preliminary to the medical treatment, removal of part of the growth may give marked relief both to voice and respiration Tracheotomy, even, must at times be resorted to If the pressure is against the trachea, the position of the patient may have an influence upon the dyspnea, the patient will soon find in which position he is the most comfortable, and should be encouraged to remain so Strychnin seems to give relief in certain cases

Aphonia must be treated upon the same plan as the dyspnea Hoarseness is usually a very early symptom, and the patient should give the vocal organs as much rest as possible Sedative inhalations can be used here with advantage The following formula can be recommended

℞ Tinct benzoini compositæ
Tinct opii camphoratæ aa f℥i
Chloroformi ♏ xx

M Sig Add a teaspoonful to a pint of water at 150 degrees F and inhale vapor

The medicated hot water is to be placed in a pitcher or bowl inclosed with a funnel-shaped paper or a folded towel Vinegar and paregoric, a dessertspoonful to a tablespoonful of the former with one-half teaspoonful of the latter to a pint of water at 140 to 160 degrees F and inhale vapor

℞ Acid acetici ♏ xxx to xlv
Tr opii camph ♏ xv to xxx

Mix and add to a pint of water at 150 degrees and inhale

Where obtainable a steam atomizer can be used to make these medicated vapors, or the medicine may be placed upon a sponge in a bottle which is placed in hot water Nebulized balsams can also be recommended Strychnin is also valuable in dyspnea and may be used hypodermically

Pain which is a most constant symptom is usually of an acute, lancinating character, and is often reflected to the ears For its relief, applications to the larynx of morphin, cocain, iodoform, acetanilid, etc, may be used Warmth applied to the neck gives some relief, as do ointments and liniments containing belladonna, chloroform and aconite applied externally Hot instillations into the ear of pure water, or warmed solutions of cocain, morphin, atropin, etc, dropped into the ear, aided by hot moist or dry external applications give relief to the severe earache

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[3] Medico Medizinische Presse, 1898 No 10

Cough may not be so prominent a symptom as to demand special treatment The sedative inhalations of benzoin (compound tincture) associated with laudanum, chloroform or conium or the local applications of morphin, and cocain usually give relief If necessary, morphin and codein may be given internally For the excessive saliva, antiseptic and astringent mouth washes and gargles, or the administration of a small amount of atropin may be recommended

The general symptoms associated with cancer of the larynx are those usually found in malignant cachexia Rest, abundant feeding and fresh air are needed Constipation being the usual condition must be relieved by enemata or mild cathartics Avoidance of tobacco and ardent spirits is important, not only for the general condition but also on account of their local irritating effect The same may be said of impure or dust-laden air The patient should be in a pure fresh atmosphere as much as possible, and if exposed to dust or impure air should breathe through a respirator Arsenic, cod liver oil, iron and tonics are indicated The mild Zittman's decoction of sarsaparilla has been recommended In the later stages, anodynes give great comfort to the patient, the hypodermic use of morphin, or morphin with atropin is usually the best method to administer them

A treatment that is more of a surgical nature, but which should only be intrusted to the skilled hand of the laryngologist, is the attempt to destroy the growth, or relieve urgent symptoms by intra-laryngeal operation, and more particularly by the use of the electric cautery When the growth is quite local, and there is no infiltration of the adjoining lymphatics, good results may be expected from a thorough destruction of the growth and the surrounding tissue by intra-laryngeal methods, such destruction may be best performed with the electro cautery, or the use of the cautery after the removal of the growth with the laryngeal knife or forceps

In advanced cases with much infiltration of the surrounding parts, intra-laryngeal removal of parts of the growth may prolong life and lessen the severity of the symptoms quite as much as can be expected from extra-laryngeal operations in such cases

Following such intra laryngeal destruction of small local growths, or after the graver operations, medical treatment upon the lines already laid down must be continued for some time in order to obtain good final results

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THE EARLY SYMPTOMS, DIAGNOSIS AND DIFFERENTIAL DIAGNOSIS OF CARCINOMA OF THE LARYNX

Read by invitation before the Philadelphia Chapter of the Alumni Association of the Jefferson Medical College at a meeting held March 12, 1895

BY WILLIAM S JONES, M D

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There is nothing in the development of laryngeal cancer which gives rise to symptoms differing in any notable way from those which characterize the onset of a benign growth Impairment of the voice is the first symptom which manifests itself, and even this may be absent for a considerable period, especially in those cases that begin in the ventricular band There, then, as the infiltration increases, the voice becomes weaker until there is complete aphonia

Probably the next symptom to develop is dyspnea Particularly is this so, if the case is entirely intrinsic, while in the case of an extrinsic cancer, dysphagia may develop owing to the mechanical obstruction in the esophagus As a direct result of this condition, salivation becomes a prominent symptom in a large proportion of the cases

As regards the involvement of the lymphatic glands of the neck in cases of intrinsic cancer, as long as the growth is confined to the larynx proper, there is no glandular enlargement This is almost without an exception While in extrinsic growths or those which involve the epiglottis the ary epiglottic folds or the arytenoids, glandular involvement is an early symptom at about four or six months Then about this time new symptoms develop The most important is ulceration and hemorrhage

Ulceration is due, in part, to attrition to which the growth is subject in the functional movements of the parts, but more undoubtedly to the increased cell proliferation, which occurs with its increased size Before ulceration sets in the secretions while increased, are comparatively normal, and may give rise to a slight irritation and perhaps cough After ulceration sets in the secretions become somewhat excessive, and consist of necrotic tissue and pus cells At the same time a characteristic odor of cancerous ulceration becomes apparent in the patient's breath This is decidedly fetid, and is usually recognized by a peculiar musty smell Sometimes the first suspicion of cancer may be excited by this odor These are all of the early symptoms of a malignant growth of the larynx, excepting pain which is not a constant symptom, and in some cases it is actually absent It is more prominent in extrinsic cancer than in intrinsic It is sharp in character and usually radiates toward the ear

In diagnosticating a case you have to consider heredity, sex and age Heredity exercises the same influence in laryngeal cancer as in any other region of the body It occurs principally in the later years of life and is much more frequent in the male than the female

On laryngoscopic examination there is nothing in the general appearance of carcinoma in its earlier stages which renders it possible to make an absolute definite diagnosis, this is the time when the patient first complains of an impairment of the voice Impaired motion of non-paralytic character leads to a suspicion of malignant infiltration, especially if any evidence of infiltration is apparent A few months from this time the laryngoscope will show to the trained eye a thickened mass, irregularly outlined, soft in consistency, in color about the same as the healthy portion of the larynx, and with a broad base As the case advances from this stage the diagnosis becomes easy The voice becomes gradually aphonic, owing to the increased tumefaction, for it is to be borne in mind that the disease consists in a cell infiltration which burrows broadly and deeply into the surrounding parts The growth gradually enlarging, encroaches on the lumen of the larynx The progressive development of all symptoms, together with the lancinating pains shooting toward the ear, and the cachexia with the glandular enlargement in the very late stages, should enable one to recognize the true character of the disease

In the differential diagnosis, there are three affections of the larynx that produce impairment of the voice which can be distinguished from cancer without the use of the laryngoscope, viz, acute and chronic laryngitis and nervous aphonia Acute laryngitis, by the sudden loss of the voice The chronic, by the difference in the tone In some portions of the day the voice is almost normal, while at another time in the same day, the voice is aphonic This will also occur in some benign growth such as polypus, which has a pedicle This growing above the cords, while remaining in that position causes little or no hoarseness, but occasionally it will drop down between the true cords and while there causes complete aphonia

In hysterical aphonia the voice is lost, and the patient simply communicates in a whisper, there is no break in the tone In all other cases of impairment of the voice, you will have to depend upon inspection of the larynx By the laryngoscope all forms of paresis of the larynx can be eliminated, for in these cases there is no tumefaction, the aphonia being due to a fixed position of one or both true cords By the same means all benign growths can be readily distinguished, their color, shape and general outlines differ from a malignant growth, also a benign growth springs from the surface or mucous membrane, and does not cause an increase in the size of the part from which it grows, or cause surrounding inflammation or infiltration This leaves two affections yet to consider, and are the two from which it is difficult to make a diagnosis These are tuberculosis and syphilis of the larynx Tuberculosis occurring the most frequently we will consider first

The first symptom we have is an impairment of the voice, cough, with increasing symptoms as the case advances The first manifestation in the larynx is unilateral The most frequent site of primary invasion is upon the arytenoid cartilage or commissure, the next, ary-epiglottic fold and epiglottis A moderate amount of tubercular infiltration seems to cause a certain amount of tumefaction, which interferes with circulation, producing a moderate amount of edema with a dull gray color, and profuse secretions When existing, there are two positive conditions in tubercular laryngitis that can not be mistaken for any other affection—the turban-shaped epiglottis and the club or pyriform arytenoids—these conditions are not caused by any other affection, but unfortunately they are frequently absent The ulceration of tuberculosis is not a deep ulcer, has a ragged uneven edge—worm-eaten as it were—difficult to detect the outlines, hemorrhage unusual, the whole larynx becomes anemic

The larynx may be invaded by any form of syphilis, from the primary lesion to the deep ulcer of the later stages The usual affection is the third stage, and of that we will speak Impairment of the voice is the first symptom, pain in this affection depends on the location of the lesion If the soft parts only are affected the pain is not marked If the epiglottis or posterior portion of the arytenoids is the seat of lesion, the pain is great on swallowing

In the superficial ulcer of syphilis we have a distinctly yellow purulent discharge, a slightly rounded elevation without swelling In the deep ulceration, we have all of the features of the superficial ulcer exaggerated, with its sharply cut edge, a marked injected areola surrounding it, and a profuse discharge of pus and necrotic tissue

When a gummy tumor forms in the larynx, whether single or multiple, we are in doubt as regards the diagnosis This presents itself in the form of a smooth, symmetrical, rounded tumefaction, which is ordinarily covered with healthy mucous membrane, it appears somewhat suddenly, and when it has attained its full size remains stationary unless ulceration occurs This may occur in any portion of the larynx and varies in regard to size The rapidity of the development of the growth, together with the subjective symptoms and the clinical history should give rise to a suspicion of syphilis, but by inspection of the larynx we may not be able to make a definite diagnosis The administration of iodid of potassium will, in a few days, determine whether we have a gummy tumor to deal with This is a test that all laryngologists will often be compelled to resort to before a decided opinion is given

In summing up, we have as distinguishing points, the age of the patient, tubercle occurring early and cancer late in life In the very large majority of instances, a tubercular process in the larynx succeeds or accompanies a similar process in the lungs

Heredity exercises the same influence in laryngeal cancer as in any other region of the body, and on inspection we have in lupus the irregular contour, highly injected membrane but no ulceration, nc secretion of pus and no exfoliation of necrotic tissue

In sarcoma, we have a distinct tumor with, perhaps, an eroded surface, but no distinct ulcerated surface with pus secretions

In carcinoma, we have a hard nodular tumor, with a ragged ulceration, the edges of which are not sharp cut, a tendency to slight hemorrhage and no well marked areola

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CHRONIC GASTRITIS AND ITS TREATMENT

Read before the Louisville Academy of Medicine, April 1, 1895

BY W CARROLL CHAPMAN, M D
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We have to-night for consideration "one of th best nourished and most widely prevalent diseases i the world" The subject is too large to review in al its details, in a paper that would interest the mem bers of this society, and it will only be my aim t present a synopsis, hoping that the discussion, b those interested, will bring out the most salient point This subject could scarcely be introduced withou some reference to the abuse of the terms, dyspepsi and indigestion, by the medical profession in genera We who pretend to be precise in our technical phrase would be highly amused at our antiquated brothe who talks of "lung fever" and "the dropsy" or th "weed in the breast," to his reverential hearers wit all the wisdom of a "Sir Oracle" Yet we preci men walk into the sick chamber, feel the pulse, loo at the tongue, get the subjective symptoms and wi the most profound gravity answer the patient query "Oh, you have a case of indigestion," an prescribe pepsin or pancreatin or such How horr fied we "higher standard of medical education" me would be to hear our professional brother tell th mother, in answer to the question as to what was th trouble with her child, say, "O, he's sick," and yet this response would have just as much meaning and be just as concise in its application in this instance as the term indigestion applied to some disease of the gastro intestinal tract Dyspepsia and indigestion are not diseases but symptoms of disease

We only refer to such methods in order to arouse the interest of the profession in this large field of special work, hoping that they may either acquaint themselves with it properly or place it in the hands of those who are capable of diagnosticating this large variety of diseases in a scientific manner

Etiology —The causes of chronic gastritis are very numerous It may result from the acute and sub acute forms when they are frequently repeated Irritants act more readily when the mucous membrane has been altered by changes in the circulation or the condition of the blood, the mucous membrane thus being rendered more sensitive than it is normally These changes in the circulation may be produced by all processes which lead to venous congestion of the stomach, such as affections of the liver, spleen, heart and lungs Tuberculosis, also of the kidney and uterus

Chronic gastritis may be caused also by direct local irritation as a consequence of cicatrices and neoplasms or irritating substances which are brought in contact for a long time with the gastric mucous membrane as large, half digested and insufficiently insalivated morsels of food, or from putrified material in the mouth, due to carious teeth or inflammation of the gums, or the muco purulent matter from pharynges being swallowed To this category also belong tobacco juice, concentrated alcoholic beverages, condiments, also toxic substances, like trichinæ and larvæ Then there are certain causative elements which circulate in the blood and are excreted in the stomach, for example urea and the products of intestinal putrefaction Of the above etiologic factors the most important are those irritating substances taken into the stomach

Pathology —The mucous membrane has a yellowish-gray or slate gray color, it is usually thickened and covered with a delicate layer of mucus The portion of the stomach usually involved is the pylorus, but may be the entire mucous membrane The submucosa and muscularis may also be thickened and the latter especially at the pylorus may cause hypertrophy with consecutive stenosis The minute anatomy of the process is that of a parenchymatous and interstitial inflammation The glandular cells are in part destroyed, partly granular and partly shriveled The superficial layer of the epithelium of the mucosa is loosened and is sometimes found in the wash water after lavage

As the disease advances it finally causes retrogressive changes in nutrition, which are at first manifested in a progressive fatty degeneration of the glandular cells, and which finally cause complete atrophy of the mucous membrane, a point emphasized by Lewy, which must finally lead to a total destruction of the secreting parenchyma with all its consequences The process progresses from above downward, and first obliterates the orifices of the ducts The stomach as a whole is enlarged, its walls appearing thinned

Another form of anatomic change is characterized by a marked activity of the interstitial connective tissue and leads to its hypertrophic proliferation, which proceeds from the base of the glands upward toward the lumen Finally, the parenchymatous cells having been deprived of their nutrition, undergo atrophy Here the organ is not enlarged *in toto*, but at times may be small and cirrhotic

Another change arises from the villous outgrowths from between the small depressions in the gastric mucous membrane, this gives rise to the polypoid outgrowths from it, usually the size of a milium to a pea, and arranged alongside of one another in large numbers

Clinical History —Chronic gastritis presents itself in two clinical forms which are easily differentiated, chronic simple gastritis and chronic mucous gastritis The differentiation really depends on the results of the chemic examination of the stomach contents The patient usually complains of a dry, pasty or salty taste which is often communicated to the food during mastication The tongue is usually coated at the base, where the reddened, swollen papillæ project above, while the edges bear the impression of the teeth The lips are usually dry and chapped Belching is very frequent, the gas being either odorless or having an effusive, sour smell and disagreeably rancid taste It is frequently accompanied by the regurgitation of the gastric contents, having a sour and disagreeable taste, these regurgitated masses often imparting a burning and scratching sensation along the esophagus When this is limited to the lower portion of the esophagus it is termed cardialgia

When these sour regurgitations occur it is important to distinguish sharply between those due to the products of fermentation—namely, acetic, fatty and lactic acid, and such as owe their taste to an over secretion of hydrochloric acid, the former condition indicating chronic gastritis and the latter being classed with the gastric neuroses

Vomiting is an irregular occurrence I have noticed numerous writers in periodical literature mentioning vomiting as an attending symptom of chronic gastritis, but such is not the case Nausea is a much more frequent symptom

Shortly after eating there is a sense of oppression or a "bloated feeling" with slight soreness in the epigastrium, the latter becoming a pain only on pressure The patients frequently complain that the food remains abnormally long in the stomach, and such may really be the case when these conditions are combined with weakness of the gastric muscular wall—atony of the stomach The latter condition permits decomposition to take place in the ingesta, the carbohydrates ferment, the albuminoids putrify This may really lead to a true gastrectasis

Constipation generally exists Occasionally diarrhea and constipation alternate

The patients have the sensation that the evacuations are incomplete and suffer much from flatulency and rumbling in the abdomen

We notice a diminution of mental activity, disinclination to bodily exertion, languor during the day, headache or a feeling of oppression in the head, and a morose, irritable disposition with a feeling of heaviness in every limb Sleep is deep and long but not refreshing Just here permit me to say that I have very little confidence in the so-called cases of "walking typhoid fever," and believe that the true condition of these cases is one of a low form of chronic gastritis in which retrogressive changes in the nutrition of the stomach itself have taken place

A peculiar condition first described by Trousseau is the *vertigo* gyrosa or gastric vertigo I have now under my care a lady who suffered from frequent and severe attacks of vertigo due to chronic gastritis These would occur without the loss of consciousness at almost any time For a while she could not incline the head forward at all without one Then they have come on while in bed, "the room whirling around and the ceiling moving," as she said, until she would cry out with fear These symptoms have almost entirely left under hydrochloric acid, strychnia and lavage

The first stage of chronic gastritis is atrophy of the mucous membrane or anemia of the stomach, i e, a condition in which complete destruction of the glandular parenchyma has taken place and has been designated as *phthisis mucosa* After a time so severe a disturbance of the nutrition is developed that the patient dwindles away and finally dies of marasmus

Diagnosis —We have, first, to differentiate chronic gastritis from other diseases and then to distinguish one variety from another Idiopathic gastritis can only be diagnosticated after ulcer, carcinoma, dilatation, neuroses or the acute gastric disorders have been excluded, and this after a careful examination with the aid of all our modern diagnostic resources Our only positive means of diagnosis is the examination of the stomach contents It has been found best to make this examination after the patient has taken what is call the test breakfast Ewald's test breakfast consists of a roll and a cup of coffee It seems to me better to substitute water for the coffee The gastric contents are obtained from one to eight hours after the meal, according to what we wish to test for For instance, the secretion of hydrochloric acid is at its height about one hour after eating At that time in simple chronic gastritis we find the amount of hydrochloric acid lessened Pepsin and rennet are small in amount, but form propeptone and peptone, usually contain lactic and fatty acids The mucous form differs from the simple in the abundance of mucus present so that acetic acid gives a marked mucin reaction, acidity always low Hydrochloric acid usually absent When atrophy has taken place the stomach contents contain after the test breakfast, neither mucus, hydrochloric acid, pepsin or rennet Where there is muscular weakness of the gastric wall it is determined by the salol test

The chemic differentiation of carcinoma and atrophy where there is no tumor, swelling of the lymphatic glands, cachexia or hematemesis is more difficult Ewald refers to one important point, namely, the bloody color of the stomach contents due to the presence of altered blood pigment

Prognosis —Chronic gastritis is a disease of long duration Even when the disease is apparently cured the organ is left so sensitive as to predispose to a fresh attack Then the disturbances of nutrition and the consequent deterioriation of the tissues render the system less resistant toward other poisons particularly tuberculosis To make the chemic diagnosis more plain let us briefly rehearse the tests Say we have the stomach contents from a patient suffering with chronic gastritis

We first filter, then, with blue litmus test for acidity It may turn either red or present no change If it turns red we next test for the kind of acid We use Congo paper knowing that if free hydrochloric acid is present we will get a sky-blue color In this case there is no change We try again with Gunzbûrg's reagent by placing a few drops of filtrate on a porcelain dish, then adding the reagent and heat If HCl this will turn bright red Still no change Then we test for lactic acid with neutral ferric chlorid solution and find it present by the deep canary color given by heat If butyric acid is present this same reagent gives a tawny color If the stomach secretes pepsin and rennet we will find here peptones and propeptones indicated by an intense purple red on the addition of cupric sulphate, the so called biuret reaction For the motility we use the salol test, and for the absorptive power the iodin and starch test of the saline and acute articular rheumatism Ewald says that a large number of the cases which are usually said to have died of old age perish from gastric atrophy

Treatment —In the treatment of this disease we should endeavor to replace the deficient supply of gastric juice, stimulate the depressed functions of the organ and counteract the irritant substances introduced from without The administration of hydrochloric acid not only replaces the deficiency in this secretion, but it prevents organic fermentation, thus filling two offices at once It should be given to its chemic effect Usually 10 drops after eating, in as little water as the patient will tolerate and if necessary repeated two or three times at intervals of fifteen or twenty minutes

Pepsin should only be administered in those cases in which its absence can be positively proved, and then dissolved in a solution of hydrochloric acid fifteen to twenty minutes after eating We doubt the efficiency of pancreatin and have had no occasion to use papoid

To stimulate the activity of the organ, lavage stands pre-eminent, except when dilatation has taken place The douche should be combined with this, i e, after the wash water runs clear, a quantity of medicated solution may be left behind Caution must be used in this, as serious toxic effects have been reported

Lavage not only stimulates the gastric functions, but removes the irritant substances which would otherwise lie in that viscus and decompose or ferment, thus aggravating the disease

It has been proved that chlorid of sodium in the blood increases the secretion of gastric juice

Nux vomica has excellent claims for this purpose, also the bitters, quassia, gentian, etc The carminatives are abused in this respect The regulation of the diet and mode of eating require the most careful attention of the physician, but these would furnish separate chapters in themselves So with the use of the numerous mineral waters Carious teeth should be removed The bowels which are nearly always constipated must be kept open As the disease nears a cure this symptom gradually leaves In this connection I wish to call attention to the most excellent results I have obtained from the use of one or two drop doses of Fowler's solution one hour or so before each meal The mode in which it acts I do not know, but possibly by stimulating the secretions, gastric and intestinal

Finally, out of door exercise in this, as in the successful treatment of all chronic diseases plays a most important and "excellent" part Of the agents employed for this purpose the bicycle for either men or women is the one *par excellence* It develops the muscles, stimulates the secretions, furnishes the best means of oxydizing and enriching the blood and to a great extent overcomes the constipation

DISCUSSION

Dr J B Marvin—The essayist has presented this interesting subject so clearly and with such easy diction that I fear he has glided over some of the points without emphasizing them enough There are one or two points as to the causation, I believe he mentioned all save one Certain conditions of the buccal and naso pharyngeal cavities are frequent causes of chronic gastritis, and the latter will not receive benefit until the naso pharynx and mouth have been put in good condition I think that the naso pharyngeal catarrh causes chronic gastritis often and not the reverse as believed by many The essayist said nothing of the various bacteria found in the stomach and they may cut a figure in these cases A case should never be classified until we have examined other important organs, heart, liver and lungs, and especially the kidneys Chronic interstitial nephritis is a most frequent cause of gastric catarrh Diabetes frequently causes gastric catarrh It has been my misfortune to see cases who came for treatment of their stomach trouble and who had sugar in their urine Another point is, I doubt if any case of chronic gastric catarrh fails to present evidences of malnutrition There is a close connection between the stomach and bowel I always put the question, and generally answer it in advance, if there is constipation, and a gastritis does not improve until the bowels are improved They go hand in hand I think a line should be drawn between gastric catarrh and the so called nervous gastritis or gastrectasis We frequently see most marked reflex nervous symptoms in chronic gastric catarrh Those who have read Bouchard on ' Auto Intoxication," and those who have not, will be repaid by doing so, will remember he accounts for these nervous phenomena by auto intoxication The essayist said nothing of the chemic tests which we use in all cases at the Kentucky School Dispensary These are best applied after a test breakfast has been given, consisting of tea, without milk or sugar, or warm water may be substituted, with a roll, or we can use this test breakfast alone and it tells us a great deal In acute gastric catarrh the pain comes on quickly In chronic gastritis if due to a hypersecretion, it comes on several hours after, and if due to deficient secretion we have pain, a sense of weight and fermentation As to treatment we hardly know what to do We begin to question whether the stomach tube does good or harm It makes them think of their stomachs, and they may begin to use the tube themselves to their own detriment But it is an excellent remedy, the benefits are so quick and striking that it forms a valuable part of our treatment It is not well to pet the stomachs with peptonized milk and predigested foods, they do more harm than good The stomach must be made to work, it needs a stimulant and exercise as it is degenerated One of the bitters not mentioned and which far surpasses all others in my estimation is condurango It is used in a fresh infusion These cases need muriatic acid, and nearly all will object to acid, they complain of sour stomach, and can not understand why they must take acid, and one has to resort to all sorts of devices to make them take it

Dr J B Bullitt—I wish to say a word in regard to exercise of the stomach A rather singular method which I have heard of from one source is this You take a stomach tube open at the end, and not at the sides, and pass it into the stomach When the end reaches the stomach a contraction is caused and a gush of fluid takes place, if the tube is withdrawn slightly and again pushed in, another contraction is produced This procedure is called, gastric gymnastics, chronic atonic conditions of the stomach and dilatation are said to be much benefited by these gastric gymnastics

Dr Chapman—I am glad Dr Marvin emphasized two points, one that chronic gastritis is caused by naso pharyngitis I did not lay sufficient stress upon it The nose and throat men are inclined to think that the pharyngitis is caused by the *gastritis* As to the impression that lavage can prove harmful, I can heartily concur in that It is a treatment which gives more relief, and comes nearer curing than any other agent that I know But it does harm to continually introduce it as is done if the patient has one himself As to the point mentioned by Dr Bullitt in regard to stomach gymnastics, I always use a tube open at the end, and I nearly always fail to obtain the stomach contents unless I have the patient press on his stomach or gag or cough This is perhaps due to the tube being soft and compressible

Dr J M Ray—I am sorry not to have heard the paper but I wish to speak of one point I heard in the discussion That is in regard to naso pharyngitis in relation to gastric diseases I can not agree with the statement that so called chronic naso pharyngitis produces often chronic gastric disturbances

There is only one form of muscular naso pharyngeal disease accompanied by an increased secretion from the mucous surfaces, and that is acute coryza The chronic form it is claimed by Bosworth, interferes with the function of the mucous glands and by hypertrophy obstructs drainage So that secretions may become obstructed in the drainage and while there is apparently an increase of secretion there is really a diminution The normal secretion is said to be about 1 per cent in twenty four hours There is a red roughened granular condition found often in the pharynx that I believe is the result of gastric disturbances, but I can not see how nasal disease causes disturbances in the stomach The idea seems quite prevalent especially among the laity that most of the ills of mankind are due to nasal catarrh We all know that the great majority of nasal diseases are found to be due to local changes in the nose

Dr Chapman—In washing out stomachs I have found frequently, large quantities of muco purulent material, often almost crusts, especially in the young who have naso pharyngitis, who swallow it while asleep These when in the stomach neutralize the stomach secretions, irritate the mucous membrane and undoubtedly cause chronic gastritis

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ACUTE NEPHRITIS IN AN INFANT

Read before the Chicago Pathological Society, Jan 11 1895

BY ELIZA H ROOT, M D

CHICAGO

Mother's history A B, age 19, unmarried, primipara, admitted to Chicago Hospital for Women and Children, Jan 25, 1894 Urine albuminous, legs edematous, purulent leucorrhea and urethritis Specific taint denied Albuminuria and edema disappeared under milk diet and Basham's mixture, and leucorrhea controlled by salicylic acid injections Child born February 26, after a normal labor lasting twelve hours February 27, decided albuminuria with puffiness of lids, which latter soon disappeared, the albuminuria, however, continuing for four or five weeks On the tenth day temperature rose to 103 degrees F, from mental excitement over her child's condition, but promptly fell to normal Mother left hospital March 13 in good condition except that the uterus was still large and congested Her occasional visits to the dispensary for six weeks enabled me to confirm the absence of syphilis

Infant's history Male, weight nine pounds, well developed, urination from the first manifestly somewhat difficult and painful The *fourth day* temperature rose to 102 5 degrees F, attended with incessant crying, and the appearance of a papular eruption, mainly on the neck and face About the tenth day temperature rose to 103 degrees and later 104 5, only slightly reduced by wet pack or bath Skin became dry and branny with fissures in axilla and groin and about wrists and ankles During the last two days of the illness the temperature fell to normal and then to 96 5 degrees Bowel movements became thin and greenish eclamptic convulsions appeared and then paralysis of left leg The child gradually became comatose and died March 10

Post-mortem findings kidneys were swollen and full of blood, presenting the appearance of acute inflammation The vena cava ascendens, beginning at or near the junction of the renal veins was filled with coagulated blood having all the appearance of an ante-mortem thrombus This thrombus was followed into the left common iliac, into the external and internal iliacs, thence to the deep and superficial veins of the thigh and readily traced into their smaller tributaries The presence of this thrombus accounts for the paralysis of the limb and the watery semi-transparent whiteness of the foot The umbilical vein and arteries presented nothing unusual, liver and spleen large and filled with blood, lungs congested, pericardial sac filed with straw-colored fluid, no evidence of cardiac inflammation Veins of the brain and its membranes contained dark blood but no thrombi Ureters and urethra patent and normal, bladder empty, stomach and intestines normal, thyroid and thymus glands normal Perirenal fat absent or nearly so, while subcutaneous fat was present in a very small degree Microscopic sections of the kidney have been kindly made for me by Dr Latham, who will present them for the inspection of the Society They show the changes of a subacute nephritis The question that has presented itself to my mind in considering the cause of renal disease in this case is, Was the disease due to septic infection, and, if so, how did it occur? The mother was unhealthy, as her history shows She was considered an unclean case and extra precautions were taken against further infection She was isolated, during the lying-in, to the extent of being assigned to the care of one nurse who cared for her and her child only I can not disabuse my mind of the idea that the infective matter still remained somewhere in the parturient canal and that infection took place through the umbilical cord

Note—Since I read this paper I have seen two infants, hospital cases, in which I made the diagnosis of renal inflammation, acute, one a boy, the other a girl Both infants presented symptoms similar to those described in the case reported, but not so severe, as both babies recovered The dryness of the skin, its cracking in the creases of the flexures and the temperature were nearly the same as in report, except that recovery began when temperature reached normal In the case of the baby girl we obtained enough urine to test for albumin and found it abundant, but not enough to determine quantity per volume Both children were very ill I expected both to die, especially the girl, as she was worse than the boy The mother of the little girl was not so well generally as the other, and at one time, prior to delivery, had a small amount of albumin in urine The other mother seemed quite well Both had a normal lying-in and left the hospital well, the babies still showing the effects of their illness but bidding fair for full recovery Both babies showed stigmata of faulty development in the bones of the head and the ears Mothers presented no similar signs

DISCUSSION

Dr G H Weaver—Dr L Emmett Hall, of New York, has written two articles on primary nephritis in infants The first appeared in 1887, at that time he had collected from his own practice and that of his friends during eighteen months, eight cases of what he called primary nephritis in infants, whose ages varied from 2 days to 2 years From the literature he collected eleven more, making nineteen cases He concluded that primary nephritis in infants is not a rare disease, but that it occurs quite frequently, although not usually recognized Five years later, in 1892, he reported two additional cases, being all that he had seen in five years, so he then modified his first conclusion, and says that primary nephritis in infants is rare and occurs infrequently

The symptoms he described in this condition are as follows Continuous fever of an irregular type, generally quite high, dullness and apathy with no focal symptoms of brain disease, marked anemia without emaciation, moderate gastro-intestinal disturbance in the early part, usually vomiting later and a tendency to diarrhea, and later a tendency to bronchitis These cases all emphasize the fact that in cases of irregular fever in infants for which there is no apparent cause the urine should be examined, and that in case of convulsions in infants the urine should always be examined In only a few cases was there marked diminution in the amount of urine observable Dr Root's case, it seems to me, might possibly belong in this class, the disease of the kidney not having been caused by infection through the umbilical vessels Changes in the liver would have been expected and changes in the vessels themselves if the infection had taken place in this way

Dr Root—The temperature in this case was high and during the last two or three days irregular, as Dr Weaver says, but there was a marked decrease in the flow of urine No examination of the urine was made, for the reason that we could not secure a sufficient quantity of it

Dr Edwin Hamill—In regard to the last point mentioned by Dr Root, that of securing a sample of urine from a baby, by placing a flat sponge over the genitals, one may succeed very often in securing urine, without resorting to the use of the catheter

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A CASE OF NEPHRECTOMY FOR SARCOMA OF THE KIDNEY

Read before the Chicago Pathological Society, Jan 14, 1895

BY D W GRAHAM, M D
CHICAGO

This sarcoma was removed from a child 18 months old There was no history of injury or acute disease About six months before the operation a tumor was discovered in the child's right side, which gradually enlarged I saw the case the last week in September and told the parents I would operate if they desired it but did not offer them any encouragement They declined the operation at that time but returned the middle of November with the request that I operate, even if the child died I operated with a kind of protest, they knowing all the dangers

At the time of operation the tumor filled the entire side of the abdomen extending down into the pelvis, it was of enormous size compared with the size of the child I operated by what is called Langenbeck's method The incision through the wall is made in the linea semilunaris The colon is pushed toward the middle line, the peritoneum over the kidney and tumor is cut through and stripped off with the fingers, the tumor being thus enucleated The pedicle consisting of the usual vessels and the ureter is isolated, the tumor freed from behind and the vessels secured I will pass this tumor around The kidney substance is at the upper end, the capsule seems to have been ruptured and the whole mass protruded downward The mass seems to have come out as a fungus at the pelvis of the kidney, shooting out toward the mid-line of the body, and even surrounding the vena cava The ureter ran across the tumor The pedicle was secured in the usual way without great loss of blood There was a good deal of hemorrhage but it came from the bed of the tumor, there being a good deal of venous oozing which could not be checked readily For the age and size of the patient a good deal of blood was lost, although the absolute amount was small The patient lived about four hours and died of shock A diagnosis of sarcoma of the kidney was made before the operation, and the microscopic examination shows it to be sarcoma of the round-celled variety The diagnosis was based chiefly on the age of the patient There is no way of determining beforehand from the clinical symptoms whether a tumor of the kidney is carcinoma or sarcoma, but we know that malignant tumors of the kidney in young children are relatively much more frequently sarcomata rather than carcinomata Dr Bishop will describe the sections he has made

MICROSCOPIC EXAMINATION BY DR D D BISHOP

Pieces were taken from the portion of the specimen which projects above the capsular-like structure and examined microscopically In the main we might say the structure is that of a round celled sarcoma The cells are rather large, have large nuclei, some are elongated having the appearance of a so called oat shape cell which we see in some tumors The structure is traversed in a gross way by broad bands of fibrous tissue showing well formed connective tissue in their interiors, but as we pass from the interior of these bands toward the tumor itself, the cells become of the same character as the cells in the tumor proper, indicating that perhaps these have developed by fibrillation and condensation of the tumor structure There are numerous small blood vessels and these show a distinct endothelial lining and a slight amount of connective tissue wall From the number of blood vessels and the fact that the round cells are arranged rather in groups about these vessels, one might think it likely that the tumor had its origin in the vascular system, and I consider that perhaps this was the fact, because in other portions there are distinct trabeculated areas in which there are rather large spaces and the trabecular walls are lined with endothelium, very much like other angiomata, so we may consider that it is probably an angio-sarcoma It is interesting to note in all the sections prepared and examined, about twenty five in number, that in no part of the kidney proper was there evidence of invasion of the sarcoma The kidney was apparently pushed to one side by the process The sections from the kidney proper, taken from the capsular-like portion show simply an atrophic condition of the glomerulli, some slight thickening of the walls, compression of the renal tubules and increase in the interstitial tissue Considering the apparently profound changes and the size of the entire structure the kidney is really very little altered The renal changes would not be considered very grave if found in a kidney not compressed by a tumor of this sort In no portion of the structure were there found any of the striated muscle cells which are said to occur often in some congenital sarcomata of the kidney, the so-called myo-sarcoma So it seems that we have not to deal with that variety of tumor, but a round-celled sarcoma probably developed in the course of the blood vessels

DISCUSSION

Dr Graham—Many of these cases of sarcoma in young children are accounted congenital There was a year of life elapsing between the time of birth and the time this tumor was discovered There was nothing in the history or appearance of things that would lead us to believe that this was not a congenital tumor and I am inclined to think the disease was present at birth

Dr. E R Le Count—In reference to congenital sarcoma of the kidney of a malignant character as reported by Dr Graham, it is very probable that they have their origin in the remains of the Wolffian bodies, while with tumors that appear later in life there is a tendency to consider their origin as having some connection with remnants of the supernumerary adrenal glands

Dr Bishop—Dr Le Count speaks of the Wolffian bodies in connection with these tumors, and I ought to add that in some of the sections are tubular like structures lined with columnar celled epithelium, suggesting that they are the remnants of the ducts of the Wolffian body, and should not be overlooked, but they were so few in number and had no apparent relation to the tumor so were not considered as having any etiologic significance The tumor perhaps, but not necessarily, occurred from that structure I did not mean to say that this tumor was not in my opinion congenital I simply stated that the striated muscle cells which are often present in such tumors were not present in this, a congenital tumor may be round-celled as well as any other variety

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A CASE OF TUBAL PREGNANCY

Read before the Chicago Pathological Society, Jan 14 1895

BY BERTHA VAN HOOSEN

CHICAGO

Mrs S, aged 22, married three and one-half years had a miscarriage after being married five months Thre months after the miscarriage had an attack of pelvic inflammation, and a pyosalpinx on the right side was diagnosed by Dr Bayard Holmes, who was caring for the patient at this time She was confined to bed for six months at this time, and spent six weeks of the time in Mercy Hospital She improved while under hospital treatment and was told that she might fully recover if she continued the hot douches after leaving the hospital Sept 19, 1894, two years later, the patient came to Dr Hickey Carr complaining of nausea and with the history of having missed two monthlies Examination of the pelvis showed the uterus enlarged and a mass was felt on the right side Liquid diet was ordered, September 23, the patient was feeling well and took an eight-mile ride on the cable car September 24, the following day at 8 A M, she was seized with pain in the pelvis and a neighboring physician was called in He gave her three doses of codein ⅙ gr each At 8 A M on same morning Dr Carr was called and found her still in pain, slight hemorrhage from the uterus but no sign of membranes, pelvic tenderness and the mass on the right more distinctly outlined

September 24, 25, 26, patient kept in bed on liquid diet without anodynes and efforts made to move the bowels with calomel, castor oil, olive oil, glycerin and water enemas but with no success Up to and including September 26, the fourth day of the attack, the pulse was 90 to 96, temperature 99 to 99½, and the pain constant September 27, at 4 A M, the patient had a third violent attack of pain and by 9 A M the pulse had risen to 120, temperature 100 Dr Carr was obliged to leave the patient to attend court, and did not see her until 2 o'clock in the afternoon At 1 o'clock she had been seized with pain and went into collapse When Dr Carr saw her at 2 P M there was dullness in the lower segment of the abdomen and the mass of the right was very indefinite I saw the patient two hours later in consultation with Dr Carr The temperature was then 100, and the radial pulse 160 The patient was blanched and appeared to be sinking rapidly

Ectopic gestation was suspected and an exploratory operation was decided upon, at 6 30 P M the patient was taken to the Chicago Hospital, a distance of four blocks from her home Dr F Byron Robinson saw the patient at 8 P M, confirmed the diagnosis and at 8 15 with the assistance and consultation of Dr Robinson, I opened the abdominal cavity, the lower portion of which was packed with loose black clots of blood These with a quantity of liquid blood were turned out, the appendages on the right side were removed, the cavity freely irrigated, glass drainage tube inserted and wound closed with silkworm gut At 9 P M, a few minutes after the operation the pulse was 152, temperature 101 4 From this time the pulse dropped until on the seventh day it did not go above 100 On the fourth day the decidua was expelled entire Drainage removed on the sixth day and stitches tightened, the wound closed by figure 8 ligature and the patient left the hospital on the fourteenth day I saw her last week and she asserted she had not been so well as now, since her marriage Since the operation she has gained in weight, menstruates regularly, and is at all times perfectly free from pain

The specimen is a very typical one and shows what a violent effort was made to accomplish tubal abortion during the four days before tubal rupture took place

Such a mishap as this illustrates, fortunately does not occur every day, because nature has practically castrated such women by closing the tubes, or so modifying the secretion that conception can not take place, but my reading leads me to believe that there are many undiagnosticated cases In fact, it does not seem to be the etiology, the pathology or the treatment that balks us in dealing with this condition, but the blunders in regard to it seem to be confined mainly to the diagnosis Some of the most typical diagnostic points are well brought out in this history Before rupture we have history of sterility and severe tubal disease, mass felt on right side, rapid increase in size of mass, symptoms of pregnancy, uterine hemorrhage After rupture we have sudden pain and collapse, slight elevation of temperature, rapidity of pulse, physical signs of internal hemorrhage To save a patient after such an accident as tubal rupture seems to me more good luck than good management, but to prevent such an accident from occurring is worthy of the most ambitious efforts

In this case, salpingotomy should certainly have been performed after the first miscarriage two years ago, as earnestly advised by both Dr Holmes and Dr Carr An infected and diseased tube can never be anything but a source of danger to a woman's health, both on account of its relation to the peritoneum and its inaccessibility to treatment, and for the same reasons I see nothing but salpingotomy that can be relied upon to permanently restore to health a woman with diseased tubes

If, however, the patient does not give us the opportunity to remove the diseased tube before such a condition as ectopic gestation can occur, should a suspicion of pregnancy in the uterus prevent us from interfering with any mass that could be felt in the pelvis, the conditions that might most easily be mistaken for ectopic gestation are pyo- or hydrosalpinx or an exudation about the tube complicating normal pregnancy If we had any one of these conditions without pregnancy, an abdominal section would certainly be indicated, and the co-existing pregnancy can not have any but a deleterious influence upon these conditions, by increasing congestion and stopping drainage through the uterus The effect of any of these conditions upon pregnancy is to constantly threaten aborting before full term is completed, to cause rupture of the tube or prevent natural delivery at the time of confinement, and after the uterus is emptied to increase the danger of sepsis and pelvic peritonitis

There are so few of even the most distinguished gynecologists who are able to make an accurate diagnosis of any pathologic condition in the pelvis, outside of the uterus, before an incision has been made in the abdominal wall, that the general practitioner in whose hands these cases first fall must feel himself very inadequate to meet the possible emergency But every practitioner should be able to say whether the uterus was enlarged, and that there was a mass at one side and on finding such a condition should he not advise an exploratory operation at once? A few cases with personal responsibility in ruptured tubes has increased my courage in prompt action and my admiration for the judgment of the man who says conservative surgery means increased mortality

DISCUSSION

Dr E F Gavin—I have been strongly tempted to suspect abdominal pregnancy of an ectopic nature in a number of cases of acute peritonitis in married women, and I think so called cases of peritonitis are frequently cases of ectopic gestation

Dr D W Graham—This is a very good report of the case and is sound teaching I know the author of the paper is not the author of the last remark, that it is a quotation in regard to conservative surgery I always feel like fighting when I hear the term used as it is used nowadays Conservative surgery means that kind of surgery which will save the life or health of the patient That is my definition of conservative surgery I know the author of the paper did not use the term in an improper sense, but I want to protest against the phrase being employed every time we are discussing subjects which have to do with removing something from the body It might be proper to say conservative treatment, or do nothing treatment, or temporizing treatment, but conservative surgery means conserving the patient's life or health and all the organs compatible with these two conditions I want to put myself on record as giving that interpretation to conservative surgery

Dr J L McCollum—I feel that too much can not be said in praise of this paper I have had some experience in operative gynecology, and I must say that I indorse most heartily the ground the Doctor has taken in not hesitating to mutilate, as this method has been termed by a great many writers who cry out against the removal of the tubes I have had a clinic in gynecology for the last six years and have had an opportunity to watch cases, some of them being under treatment for two years I would have them discharged as cured but they would come back in a few weeks with the same trouble, which if not as bad was in the way of becoming so shortly I can not see any reason why we should hesitate to remove the tubes after a reasonable course of treatment is unsuccessful

Dr F B Earle—I certainly think the author deserves congratulations, both on the paper and the result of her treatment The diagnosis of ectopic gestation is very difficult before rupture of the sac, in fact, some authors state that it is impossible However, when we have a history as in this case, of previous disease of the tube with probable occlusion we have one of the principal factors in the etiology Amenorrhea and a period of sterility so frequently precedes ectopic gestation that the usual symptoms of pregnancy following a condition of that kind should always excite our suspicion When there is a bloody discharge from the uterus with the negative symptoms of pregnancy, with a tumor presenting at the side of the uterus and pain at the site of the tumor, particularly if that tumor presents a soft boggy feeling, then there is every reason in the world to suspect extra uterine pregnancy As to treatment, there can be no doubt as to the indications when the diagnosis is properly made The ovum at that site is of dangerous omen and the sooner it is gotten rid of the better The use of electricity to destroy the ovum has many advocates but laparotomy is comparatively safe and inasmuch as it is, and may be called for even after death of the ovum, probably the best method is to resort to it as the primary treatment

Dr Bertha Van Hoosen, in closing the discussion, said I would like to say one word about conservative surgery I suppose by conservative surgery we mean as simple an operation as possible to save the woman's life, that depends a good deal upon the judgment I saw an extra uterine pregnancy operated upon at the Post-Graduate Hospital, the patient had been consulted over by several doctors and each one proposed curetting, until it happened that one consultant thought it might be better to see exactly the condition inside the pelvis Abdominal section was made and it was found that she had an ectopic gestation on one side and a very large pus tube on the other I think if curetting had been resorted to it would have been what Dr Graham would call conservative surgery

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ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER 1854–1894

BY JOSEPH JONES, M D, LL D

NEW ORLEANS LA

(Continued from page 553)

Chapter VIII

Case of gastritis, fever and jaundice, resulting from exposure and bad diet John Austin, age 16, laborer, admitted to Charity Hospital Nov 30, 1876 Says that he had felt unwell for three or four days before admission Complained of loss of appetite and diarrhea Ordered light diet and bismuth mixture

℞ Syrupi morphiæ ℥iij
Bismuthi subnitrates ʒiij
M Sig, teaspoonful three times a day or every four hours if necessary

December 4, temperature of the axilla 101 4 December 5, 101, December 6, eyes and skin decidedly yellow, patient complains of feeling very heavy and depressed Morning pulse 82, respiration 18, temperature 99 8, P M, temperature 100 5 December 7, morning, jaundice increasing, decided yellow color of conjunctiva and skin, pulse 72, respiration 18, temperature 99 5, evening, pulse 72, respiration 18, temperature 100 5 December 8, urine high colored and loaded with bile, albumin absent, chlorids abundant, yellow color of conjunctiva and skin A M, pulse 74, respiration 18, temperature 99, evening temperature 100 5 December 9, morning, pulse 80, respiration 18, temperature 95 5, evening, pulse 80, respiration 18, temperature 101 5 December 10, evening, pulse, 76, respiration 18, temperature 102 6 Urine loaded with bile, skin yellow, hot and dry December 11 morning, pulse 80, respiration 18, temperature 99, evening, temperature 102 December 12, morning, pulse, 80, temperature 100 5 evening, temperature 101 6 December 13, during the past four days quinin has been freely given, the bowels having been previously evacuated by a mercurial purgative The depth of the color of the skin is now decreasing Morning, pulse 84, temperature 99 8, evening, temperature 100 5 Continued to improve and was discharged

We observe in this case in which jaundice accompanied fever, perhaps of a malarial character, that on January 10, with a temperature of 102 6, the pulse was only 76 beats per minute

PERNICIOUS AND CONGESTIVE MALARIAL FEVER

The rate of mortality in my surgical practice has varied with the season, the type of the disease and the manner of admission of patients When from such causes as scarcity of funds, the lighter cases of disease were treated as out door patients, and only those seriously ill admitted, the rate of mortality among the cases treated in the wards was relatively increased At the same time the number of out-door patients prescribed daily in the wards was greatly augmented I have carefully excluded from the statistics recorded in my "Medical and Surgical Memoirs," those relating to out-door patients connected with the Charity Hospital, although during, some seasons they have exceeded in numbers those actually treated in the wards During the twenty-seven months of hospital service, preceding April 1, 1872, the total number of cases admitted into my wards in the Charity Hospital was 1,111, of this number 856, or 77 9 per cent were discharged, and the deaths amounted to 106, or 9 4 per cent of the entire number treated, during this period, also, a large number of the cases which terminated fatally were brought in moribund During the six months ending April 1, 1873, the total admissions numbered 213, of this number 145, or 68 per cent were discharged The deaths amounted to 39, or 18 5 per cent During the first period the deaths amounted to 1 death in 10 4 cases, in the latter period, 1 death in 5 46 cases

During a period of six months, Oct 1, 1873 to April 1, 1874 the total admissions numbered 517, of which 436 were discharged and 51 died, the deaths amounting to 1 in 10 13 cases, or 98 per cent During this period more than one-third or 19 deaths were caused by yellow fever, many of which were brought in moribund, with jaundice and black vomit

During a period of twelve months, Oct 1, 1874, to April 1 1875, Oct 1, 1875, to April 2, 1876, 765 cases were treated, with 65 deaths, or one death in 11 8 cases, or 8 5 per cent

I have selected the following cases from the clinical records of my wards, to illustrate the condition in which many of the patients entered, and the effects upon the rate of mortality

Case 1—Pernicious malarial fever (malarial coma) Unknown man, age about 35 entered Charity Hospital Oct 17, 1872, died in six hours Patient brought to the hospital in an insensible condition, from which he could not be aroused, rapid feeble pulse, skin sallow with a decided tinge of yellow, extremities cold, congested and mottled, lips and fingers purple, passes urine and feces freely in bed, head and trunk hot, temperature of axilla 103 Sinapisms and alcoholic stimulants failed to arouse the patient, large doses of quinin administered by enema have no effect

Post-mortem three hours after death Blood vessels of brain congested with dark blood, lungs and heart healthy, mucous membrane of stomach and intestines slightly congested, liver slate colored on the exterior and bronzed within, abundant pigment deposits in portal capillaries, spleen enlarged and softened, splenic mud contained numerous pigment particles, kidneys normal, gall bladder distended with dark green bile, cavities of heart contained fibrinous clots, blood of liver of a dark purple color

Case 2—Pernicious malarial fever (malarial coma) F F Payne, age 32, native of Virginia, entered Charity Hospital Oct 28, 1872, died October 29, twenty hours after entrance Has been exposed in swamps of Mississippi River Admitted in a comatose state Rapid pulse, congested purplish extremities When aroused by violent shaking, appears to be in a state of great agitation and gives incoherent answers Passes excrements in bed Sinapisms, alcoholic stimulants and quinin produced no permanent effects

Post-mortem six hours after death Heart and lungs normal, fibrinous clots in cavity of heart, liver slate colored on the exterior and bronze within, spleen enlarged and softened, gall-bladder distended with dark green bile Stomach contained a considerable quantity of greenish-yellow fluid resembling bile, numerous pigment granules were observed in the structures of the liver and spleen

Case 10—Malarial congestion or pernicious fever Charles Smith, native of Switzerland, age 60, entered Charity Hospital Oct 18, 1872, and died October 19 During the summer and fall has been exposed to swamps and marshes Entered in a state of wild delirium Rapid feeble pulse, rapid respiration, prostration of muscular and nervous forces, capillaries of extremities congested, head and trunk hot, temperature of axilla 103, which continued up to the time of death Passed feces and urine in bed Sinapisms, diffusible stimulants and quinin produced only temporary improvement and the intellect was restored but for a short time Intense jaundice appeared before death, which occurred in thirty-six hours

Post mortem six hours after death Surface golden colored, heart and lungs normal, liver slate-colored on the exterior and bronze within, much pigment in portal and hepatic capillary network Gall-bladder distended with dark almost black greenish bile, spleen enlarged and softened, kidneys healthy

Case 3—Malarial, congestive or pernicious fever John Kerrin, age 39, native of Denmark Has suffered for some time with malarial fever, in a low, unhealthy marshy location Entered Charity Hospital moribund, pulseless, comatose, Feb 9, 1873, died in twenty four hours, Feb 10, 1873 Diffusible stimulants, sinapisms and sulphate of quinia induced only temporary improvement

Post-mortem examination Heart normal, contained fibrinous clots, malarial liver, slate-colored on exterior and bronze within, loaded with black pigment, spleen enlarged, softened and loaded with pigment

Case 4—J Duber, malarial fever and dysentery, native of Germany, age 45 Has been exposed in swamps and has been subjected to scant diet and bad water Entered Charity Hospital Nov 12, 1872, and died November 19 Entered hospital in a most filthy and miserable condition, comatose, pupils contracted, pulse rapid and thread-like—so rapid and feeble that the number of beats are determined with difficulty Bowels loose, passes feces and urine in bed Has been sick for some time Immense bed sores are forming over scapulars, sacrum and hips Under the use of large doses of quinin and opium, carbonate of ammonia and alcoholic stimulants the patient rallied and at one time I entertained some feeble hope of his gradual improvement The change, however, was only temporary, and death appeared to result chiefly from the profuse discharges from the bowels, patient died six days after entering the hospital

Post-mortem six hours after death Heart and lungs normal, liver slate-colored on exterior and bronze within with much black pigment, spleen enlarged and contained much pigment, ileum, colon and rectum much congested, numerous ulcerations in mucous membrane of colon and rectum In the chronic dysentery of the Mississippi Valley and of the Southern States generally, I have found by post-mortem examination that ulcerations of the large bowels are almost always present

Case 5—Malarial congestive fever, with hemorrhage from the bowels John Kelly, age 42, native of Ireland Entered November 11 and died November 13 Cause of disease, exposure on banks of Mississippi and bad diet Entered in a delirious feeble state with rapid feeble pulse, distended abdomen, enlarged liver and spleen, anemic, sallow, greenish-yellow malarial hue Passes foul stinking feces in bed On the night of the 12th the patient had a prolonged (congestive) chill, which was attended by a profuse discharge of fetid bloody matters in his bed Quinin, opium, stimulants and sinapisms produced only temporary effects, and prolonged life only a few hours

Case 6—Malarial congestive fever and dysentery, profuse hemorrhage from bowels F Harrington, age 33, native of Ireland Entered Charity Hospital Jan 11, 1873, died January 21 Has been exposed to the prolonged action of malaria, cold, and wet, and bad diet in swamps along the Jackson R'y Entered with feeble rapid pulse, sallow and anemic, jaundiced hue, liver and spleen enlarged, suffers with quotidian intermittent fever and painful chronic dysentery, discharges from bowels painful, frequent and loose Under the free and continuous use of subnitrate of bismuth, opium and quinin, with milk and rice diet, there was marked improvement On the night of January 18, patient had a prolonged and severe congestive chill attended with profuse hemorrhage from the bowels, which was followed by collapse and death

Post-mortem six hours after death Heart and lungs normal, liver slate-colored on exterior and bronze within, with much pigment matter, spleen enlarged, mucous membrane of large intestine ulcerated

Case 7—Pernicious fever and dysentery terminating fatally with profuse hemorrhage from bowels Timothy Harrington, age 32, laborer, admitted to Charity Hospital Jan 11, 1873 Patient states that he was taken two weeks ago with violent pain in the lower bowel, with frequent desire to go to stool, and great tormina and tenesmus Bowels moved six or eight times in twenty-four hours January 13, pulse 100, of good force and volume Complexion anemic and greenish-yellow, spleen and liver enlarged and has been exposed to the action of malaria Temperature 102 degrees Applied blister on right iliac region for relief of pain Administered 5 grains of quinin and 10 drops of the tincture of opium every three hours, until four doses were taken Fever not affected by quinin perceptibly, patient restless and complains of pain in bowels January 15, pulse 108, very feeble, patient feeble and weak During the night of the 15th had a protracted and severe chill of the type ordinarily called congestive, extremities purple, pulse a mere thread January 16, patient in a state similar to the cold stage of congestive fever, cold clammy sweat on the surface, complete prostration, pulse rapid and feeble, turpentine stupes and sinapisms were applied and quinin and alcoholic stimulants administered, both by the mouth and by the rectum These measures brought on reaction and the patient appeared to be improving The temperature of the axilla, however, during this period of depression and coldness of the extremities was above the normal standard, as will be seen by the following record January 13, temperature 102, pulse 100, respiration 18 January 14, temperature 100, pulse 99, respiration 17 January 15, A M, temperature 101, pulse 86, respiration 19 January 16, temperature 101 5, pulse 108, respiration 18 January 17, temperature 102, pulse 88, respiration 23 January 18, patient vomiting large quantities of biliary matter and utterly unable to retain anything on his stomach, A M, temperature 101, pulse 84 respiration 18 January 19, during the nights of the 18th and 19th the patient was again affected with a prolonged congestive chill, attended with profuse hemorrhage from his bowels His bed was literally flooded by the hemorrhage from the bowels Pulse 128, respiration 18, temperature of axilla 100 I examined the urine with great care and interest in the case, as it bore striking resemblance to some cases of malarial hematuria The urine contained no blood corpuscles and no albumin, but abundant urea, urates and uric acid, was of a bright straw color, strong acid reaction, specific gravity 1025 January 20, temperature 100 5, pulse 120, respiration 20 Died January 20

Post-mortem Twelve hours after death Heart and lungs normal, liver enlarged, slate colored on exterior, bronze within, loaded with pigment particles, spleen enlarged and softened, mucous membrane of intestine congested, large intestine ulcerated

Case 8—Intermittent fever arrested by full doses of the sulphate of quinia James Davis, age 25, native of England, has been exposed to the action of malaria in the swamps of the Red River Entered Charity Hospital January 19, discharged Jan 27, 1873 Upon entrance complained of pain in right side Had severe chill during night of 21st Bowels opened with 10 grains of calomel, combined with 5 grains of quinin and followed with 5 grains of quinin every two hours, until 20 grains were taken Under the action of the quinin there was a rapid subsidence of the temperature The quinin was continued, about 10 grains being administered daily for several days, no return of chill and fever This patient had had chill and fever every alternate day up to entrance in hospital The following observations illustrate the rapid fall of temperature under the action of quinin January 21, 8 A M, chill just passing off, temperature of axilla 106 3, quinin freely administered At 8 P M, temperature 102 3 On 22d, at 8 A M, temperature 99 3, 8 P M, temperature 99 On 23d, 8 A M, 99 4, 8 P M, 100 On 24th, 8 A M, 98 5, 8 P M, 98 4 On 25th, 8 A M, 98 4, 8 P M, 99 2 On 26th, 8 A M, 99 4

Case 9—Congestive fever, loss of muscular power, general paralysis, loss of memory Recovery Peter O'Brian, age 41, native of Ireland, laborer Enjoyed good health up to November, 1872, when he left St Louis, Mo, where he had been employed as a ditcher, with the intention of settling in New Orleans On his passage down the Mississippi River to New Orleans he was robbed and left destitute After arriving in this city he was for nearly a week without shelter or sufficient food, and slept at night on the levee without covering of any kind, during cold and inclement weather This exposure and want of food so reduced the strength of the patient that he was compelled to apply for lodging at the police station, where he was "very ill with chills and fever" From the police station he was transferred to the workhouse, in which place "becoming much worse" he was sent to the Charity Hospital He was brought in January 12, 1873 in an insensible comatose state, with loss of speech and power of motion Lay insensible in the bed, passing his urine and feces involuntarily Could not be aroused At times the patient appeared to suffer with true malarial chills attended with shivering, depression of the temperature of the extremities, elevation of that of the trunk and congestion of the peripheral capillaries, and followed by general diffusion of heat and high temperature

Regarding the chills, fever and coma of malarial origin and aggravated by exposure and starvation, I placed the patient upon a solution of quinin

℞	Quiniæ sulph	gr xxx
	Acidi citrici	ʒss
	Tinct cinchonæ comp	f ℥viij

Mix Tablespoonful in wine glassful of water, every four hours, and ordered beef tea and milk punch, every two hours

Under this treatment, the improvement was slow but gradual, and on January 7, he was able to give a few coherent answers The brain, however, was in such an enfeebled condition that he was able to give his name and answer a few questions, when his mind would wander and he would relapse into an unconscious condition The quinin with tincture of cinchona and quassia, and the nutritious diet was continued, and on January 13, the thirty second part of a grain of strychnia, in solution with the citrate of quinin and iron was administered three times a day.

℞	*Strychniæ sulph*	grs ij
	Acidi citrici	ʒij
	Quiniæ et ferri citrati	ʒiij
	Aquæ destillatæ	f ℥viij

Mix Sig , teaspoonful three times a day

This patient was carefully observed by the students of the ward, *and was also at regular intervals brought* before the entire class in the amphitheater, in order that the gradual improvement of the mental and muscular power might be noted The patient slowly progressed to *complete* recovery and was discharged at the end of sixty days

CHRONIC MALARIAL POISONING

Case 1—Great anemia, fatal results D Hoffman, age 28, native of Germany *came to* this country two years ago After remaining in New Orleans one month, went to Franklin Parish to work on a plantation Was taken sick with chills and fever three weeks before entrance into the hospital, and during this time had little or no medical attendance and had but indifferent supplies of food Entered Charity Hospital Oct 28 1873 Pale, *anemic*, hands bloodless and when held up to the light resembled semi-transparent light yellow and greenish wax Countenance pale, yellowish green, swollen and bloated Lips and tongue pale like the face, tongue pale, large, flabby, with *the edges* indented by the *teeth Action of heart loud, rapid and irritable*, with loud anemic murmur The anemia in this case was as intense as in the most pronounced cases of chronic malarial poisoning in the Mississippi valley Belly and lower extremities anasarcous October 29, 8 P M , pulse 110, respiration 20, *temperature 103 5* October 30, 8 A M , *pulse* 104, respiration 20, temperature 101 5 October 31, 8 A M , *pulse 106, respiration* 24 temperature 101 5 , 8 P M , pulse 106, respiration 24, temperature 101 November 1, pulse 100, respiration 20, temperature 101 6 , 8 P M , pulse 108, respiration 25, *temperature 101 5* November 2 *pulse* 108, respiration 18, temperature 101 5 , 8 P M , *pulse 100*, respiration 20, temperature 100 November 3, *pulse 116, respiration* 28, temperature 101 6 , 8 P M pulse 112, respiration 32, temperature 100, November 4, pulse 104, respiration 22, temperature 101 The patient *complained of pain* in the epigastrium and region of heart together with great dyspnea The *difficulty of* breathing appears to be clearly due to edema of the lungs, induced by the watery *condition of the blood, and is* similar to the universal anasarca *with which* all parts of the patient appeared *to be afflicted* The distress in breathing and the pain in the heart increased during the night, and was attended with great thirst The patient died at 8 A M , November 5 Death apparently due to edema *of the lungs* The preceding changes *wrought in the blood* and *textures* by the malarial poison were the chief causes of death

Autopsy Two and one half hours after death Body warm and limber in *rigor mortis* Exterior, full bloated anasarcous appearance, *cellular tissue* infiltrated *with* yellow serum, color greenish yellow, resembles a Chinaman Chest, lungs bloodless, pale, anemic, edematous Heart enlarged, with dilatation of right auricle and ventricle, color of heart *natural*, when the textures of the heart were carefully examined under the microscope with magnifying powers of various degrees, *the transverse striæ were found* to be distinct and there were deposits of granular and pigmentary matter within *and around* the fibers of the heart as in yellow fever Cavities of the heart distended with dark fluid blood *Specific gravity* of blood 1023 3 , specific gravity of serum 1017 , solid matters in 1000 parts of blood 77 71 , in 1000 parts of serum, 60 94 , 1000 parts *of* blood in the patient contained not *more than* 17 *parts of* red blood corpuscles in 68 moist blood *corpuscles, while in healthy blood* the moist *corpuscles may* reach 600 parts , the liquor sanguinis 400 parts In the present case the liquor sanguinis was 932 parts in 1,000 Under the microscope, the colorless *corpuscles* were found to be greatly increased, relatively to the colored *corpuscles* Abdominal cavity Liver slate on the exterior, and bronze within Under the microscope the liver cells were found to be loaded with dark pigment particles, which were also deposited in large numbers within and around the portal capillaries When sections of the liver were made with Valentine's double bladed knife and examined under the *microscope*, numberless dark pigmentary masses were seen both in the portal and hepatic systems of capillaries Liver firm, evidently undergoing a *hardness* or cirrhotic change *which appeared to be* due *to the action of malaria* Gall bladder distended with dark green bile, about two fluid ounces Bile thick and ropy Specific gravity of bile *1022* Solid matter of bile 1000 parts, 82 19 The bile was *actually of very nearly the same specific* gravity as the blood, and contained more solid matter Spleen enlarged and loaded with dark pigment particles Kidneys firm and *normal*

In *the preceding case quinin, nutritious* diet and alcoholic stimulants were used but without *avail*

Case 2—*Chronic malarial poisoning, intense anemia*, jaundice, high temperature, anasarca, fatal issue P *Eghart, age 25, laborer*, native of *Germany* Has been in Louisiana eight months Has been living in a low swampy *region* Has had chills and fever, with little *or no medication* and *with scant* supplies of coarse food Entered the Charity Hospital on the evening of Nov 22, 1873 November 23, pale, sallow and greenish yellow complexion, bloated, swollen features, extremities *edematous*, *scrotum swollen*, feeble prostrated condition, *great prostration of* nervous and muscular forces, rapid feeble pulse, loss *of* appetite, anemia complete, lips *and* tongue pale, when hands are held up to the light *they present a* wax-like almost semi transparent appearance, tongue pale, flabby and *indented at the sides*, urine high colored but free from albumin *and casts*

Before coming to this country this patient followed the trade of architect and enjoyed good health His present deplorable *condition* is clearly referable to the action of the malaria of the swamps

November 24, 8 A M , pulse 112, respiration 21, temperature of axilla 105 degrees, 8 P M , temperature 104 8 *November* 25, continues in the same condition *only apparently more* feeble, *can take* but little *nourishment* Quinin administered freely , 8 A M pulse 116, temperature of axilla 103 , 8 P M , temperature of axilla 104 degrees November 26, *delirium, great* prostration, jaundice quite *intense Pulse rapid* and feeble , skin hot and dry , tongue dry and pointed Great thirst, nausea and *vomiting, Can* retain no nourishment *on* stomach It has been *difficult* to introduce nourishment by the rectum on account of the irritable condition of the bowels Urine high colored but free *from albumin* and blood Chlorids present but diminished in amount 8 A M , temperature 102, *8 P M , temperature 103* Died at 6 A M , November 27

Autopsy three hours after death Body warm, limbs flaccid Exterior, color of surface yellowish-green, lower extremities edematous, belly full. Thorax Pericardium contained about two fluid ounces of golden yellow serum Heart, of the normal deep color of this organ in health , perhaps it would be more *accurate* to describe the color as of a deep purplish red , muscular structures of the heart. firm Under the microscope the muscular fibrillæ presented a normal appearance, with distinct transverse *striæ* , *and there was also* a complete absence of the yellow granular molecular *matter* and oil globules characteristic of yellow fever Surely such cases as these now recorded, when the malarial poison has exerted its unobstructed action in healthy Europeans, must yield unexceptionable results in settling the character of the changes induced in the chemistry and minute anatomy of the organs by the malarial poison Heart normal in size

Microscopic and chemic examination of the blood from the cavities of the heart and from the vena cava

Specific gravity of blood	1021
Specific gravity of serum	1015
Solid residue in 1,000 parts of blood	73·00
Solid residue in 1,000 parts of serum	58 00

The blood of this patient contained less than sixteen parts of dried colored blood corpuscles in 100 parts of blood The true composition of the blood as compared with that of normal blood would be 64 parts of moist colored corpuscles and 936 00 parts of liquor sanguinis, against 600 parts of moist corpuscles and 400 parts of liquor sanguinis in healthy blood

The blood from the cavities of the heart contained a large number of dark irregular masses of hematin of various sizes, from 1-2000 to 1-500 of an inch in diameter These dark pigment masses were similar in all respects to those found in the textures of the liver and spleen The blood also contained oil globules which accumulated upon the surface during the coagulation Fibrin diminished, coagulum large and soft Heart normal in size and structure Lungs healthy with the exception of hypostatic congestion of dependent portions Abdominal cavity Stomach distended with gas, and pale, anemic in appearance Contained a quantity of liquid deeply tinged by bile

Liver Enlarged and somewhat hardened, deep slate color on the exterior and bronze within Liver cells contained but few oil globules, but on the contrary many dark pigment particles Sections with Valentine's double-bladed knife, revealed under the microscope numerous irregular masses of dark pigment, deposited both in the portal and hepatic capillary network The pigment was deposited on the walls of the veins and secreting structures as well as in the cellular interspaces Gall bladder flaccid and contained about 50 grams of thin mucoid yellow bile, loaded with the desquamated cells of the mucous membrane of the gall bladder Spleen, enlarged and softened, with numerous dark pigmentary particles Kidneys, normal, with the exception of two slate-colored spots, about half an inch in diameter on each kidney Discoloration due to deposits of black pigment particles

Remittent fever B Casavan, age 27, laborer, native of France Entered Charity Hospital Nov 6, 1875 Patient entered with delirium and jaundice, and upon a superficial view resembled a case of yellow fever November 7 8 A M, pulse 115, respiration 30, temperature of axilla 104 5 Tongue very red about the edges, furred in the center and cracked Hemorrhage from both tongue and gums Gums red and swollen Upon inquiry I found that this patient had been working on the lower coast and had suffered with paroxysmal fever for about twenty days before entering the hospital At 8 A M, pulse 137, respiration 24, temperature 105.2 Notwithstanding the increase in the pulse, which differs from that

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and casts and manif
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temperature, pulse a

Date	Puls
1873	M
Nov 7	115
8	117
9	96
10	96
11	96
12	84
13	90
14	102
15	80
16	80
17	90
18	78
19	80
20	75
21	82
22	82
23	84
24	84
25	82

PATHOLOGIC AN

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of diminishing
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This will be illus
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Remittent fever
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Remittent fever
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Chronic malaria
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pulse 60 61, 54, 5
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Oct 6, 1873 Sick
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pulse 76 72, 72, 82
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70, respiration 20, 20, 22 18, 18, 17, temperature 9872, 100 4 100 2 100, 99 8 99 7

Remittent fever Convalescence G Peifer, age 33, laborer, native of Germany Sick fourteen days before entering hospital Resided in New Orleans fifteen years Admitted Oct 7, 1873 Had fever and dry furred tongue at time of admission, with great prostration, urine free from albumin, Observations began on next day, October 8 Quinin administered and with good effect A M, pulse 70, 74, 72, 68, respiration 15, 18, 16, 15 temperature 97, 98 99 6, 98 8 P M, pulse 96, 74 72, 70 66, respiration 18, 14, 15, 15, 14, temperature 98 3, 98.2, 98 5, 98 2, 99 1

George Wilson, occupation wood chopper, age 20, native of New Orleans, attacked with dizziness, pain in head and fever Sept 24, 1873 Entered Charity Hospital October 1 Complexion yellow, gums yellow, constipated pain in epigastrium, brown furred tongue Quinin arrested the fever Observations began October 8, A M, pulse 72, 71, 62, respiration 22 23 20, temperature 99 5, 97 5 98 6 P M pulse 78, 67, 61, 66, respiration 22, 22, 22, 22, temperature 98 2, 98, 97 8, 98 5

Remittent fever F McKenna, age 35, native of England, laborer Attacked five days before entering hospital Has resided in America one year, in New Orleans six weeks Has been working on dredge boat Admitted to Charity Hospital Oct 13, 1873 On admission, high fever, brown, dry tongue Observations began October 16, while patient was under the influence of quinin and he perspired freely Quinin 15 to 20 grains daily No albumin in urine Discharged October 20 A M, pulse 74, 62 60 57, 54, respiration 22 14 16 18 16, temperature 103 8, 99 4, 99 3, 97 25, 98 P M, pulse 89, 60 61, 56, respiration 22, 16, 18, 20, temperature 103 2, 99, 95 5, 99

James Topliff, native of New York, age 30, clerk Admitted Oct 10, 1873 Resided in city one week Disease remittent fever Taken sick October 9 Urine light colored, no albumin October 11 high fever, vomited green bile Bowels opened with mercurials and fever treated with quinin, 15 to 30 grains daily Observations began October 11 Discharged cured October 24 A M, pulse 84, 72, 64 88, 82, 60, respiration 14, 16, 16, 18 20 18, temperature 101 5, 100 7, 101, 103 1 102, 98 4 P M, pulse 80, 72 72, 94 78, 60, respiration 16, 18, 17, 24, 14, 20, temperature 101 8, 101, 101 4, 105 7, 99, 98 4

Remittent fever John Gilmore, age 24, admitted to Charity Hospital Sept 30, 1873 Had been sick two weeks before admission to hospital Native of Ireland, has resided in Louisiana three years Urine free from albumin October 13 had a paroxysm of fever, which was arrested by quinin Discharged October 27 A M pulse 100, respiration 22, temperature 104 8 P M, pulse 96, respiration 22, temperature 103 8

Remittent fever George Letz, age 40, German, resided in New Orleans five years Entered Charity Hospital September 29 Sick four or five days before entering hospital October 3 had a paroxysm of fever Quinin arrested the fever and reduced the pulse A M, pulse 82, respiration 22, temperature 102 4 P M, pulse 90, respiration 26, temperature 104 5

Remittent fever J Dudley, age 24, native of New Orleans Has had malarial fever for three consecutive seasons Has been working on a plantation on the Bayou Teche Entered October 24 Observations began October 31 Very obstinate case Quinin finally arrested the disease No albumin in urine Improved on quinin and iron A M, pulse 86, 76, 78 98, 92, 92, 82, 70, 80, 76, 84, 84, 83, respiration 20, 20, 18, 25 20, 16 20, 16, 20, 20, 16, 22, 23, temperature 102 3, 99, 100 6, 101 5 102 7, 102, 102 7, 100 5, 101, 102 5, 101, 102 P M, pulse 84, 92, 78, 98, 98, 86, 82, 84, 92, 88, 87 86, respiration 20, 20, 18, 25 20 24, 20, 16 16, 20, 19 20, temperature 101 4, 101, 100 8, 101 5, 102 5 102 102 7, 101, 102 5, 100, 102

Chas Schmidt, age 42, native of Austria Has had yellow fever Entered Charity Hospital and observations begun Oct 23, 1873 No albumin in urine, delirious, tongue red at tip and edges, dark brown in the center Pain in head, bones and epigastrium Discharged October 31 A M, pulse 120, 78, 88, 80, 64, 66, 58, 68, respiration 46, 24, 30, 27 22, 20, 18, 28, temperature 105, 99.2, 104, 100, 98 5, 97, 98 4, 98 P M, pulse 110, 98, 84, 66, 64 52, 62, respiration 30 35, 28, 25 22, 24, 20, temperature 103 9, 103 5, 103 5, 99 1, 97 5, 97.8, 97, 99 1

Chronic malarial poison Remittent fever Charles Tinbers age 21, native of France Has been in New Orleans six weeks, sick two months before entering October 2, had chill followed by fever Severe headache restless pale and anemic Urine red and free from albumin Treated with full doses of quinin Disease arrested November 5 Bile in urine, no albumin, specific gravity 1025 A M, pulse 90, 88, 74, 72, respiration 22, 25, 18, 16, temperature 103 8, 100, 101, 101 2, 98, 98 2 P M, pulse 108, 92, 90, 80, respiration 44, 26, 24, 19, temperature 100 5, 98 4, 100 8, 98

Intermittent fever John Gilmore, native of Ireland Entered Oct 30, 1893 Had chills and fever five days before entering hospital October 31, when record of pulse and temperature was begun, had a chill at 100 degrees followed by high fever, and at 7 P M the temperature was 106 degrees, pulse 108, respiration 24 Sulphate of quinin was freely administered and the fever ceased November 13 and did not return This was a clear uncomplicated case of intermittent fever A M, pulse 72 73, 74, 80, respiration 18, 20, 22, 18, temperature 99 5, 100 4 100 8, 98 8 P M, pulse 101, 79, 72, 74, respiration 21, 23, 18, 18, temperature 106, 101, 100 6, 98

Intermittent fever Michael Dolan Sick one week before entering hospital, Oct 23, 1873 Observations begun October 26, general appearance anemic, pain in epigastrium Had fever on 23, when entering Quinin freely administered arrested the fever A M, pulse 60 54, 48, 52, 52, 50, 60, 54, 58 respiration 28, 24, 26, 20, 24, 24, 19, 18, 19, temperature 98 5 98 98 5, 98, 98 8, 98 6, 97, 98, 98 P M, pulse 52, 52, 48, 48, 52, 56, 55, 52, respiration 24, 22, 30, 20, 24, 24, 24, 18, temperature 96, 98, 98 2, 99, 99 5, 99 2, 100, 98 5

In many severe and fatal cases of yellow fever the respiration is often greatly accelerated, as in the following case which entered Charity Hospital Oct 10, 1873 Had been sick for five days At 6 P M, shortly after entrance, pulse 84, respiration 48, temperature 102 4 Patient delirious, restless and vomiting black vomit, suppression of urine Died next morning at 8 o'clock

(To be continued)

PERITONEAL SUPPORTS—(LIGAMENTUM PERITONEI)

BY BYRON ROBINSON, M D

PROFESSOR OF GYNECOLOGY POST GRADUATE SCHOOL
CHICAGO

(Continued from page 546)

It is likely that the meshwork of perforations in the great omentum is due to the arrangement of the blood vessel and an atrophy of the intervening space In the horse the mesentery becomes thin and occasionally, Dr Baker informs me, that a strangulated loop of intestine is found protruding through the perforated mesentery In the dog I have found very thin, transparent areas, but never a perforation of the mesentery

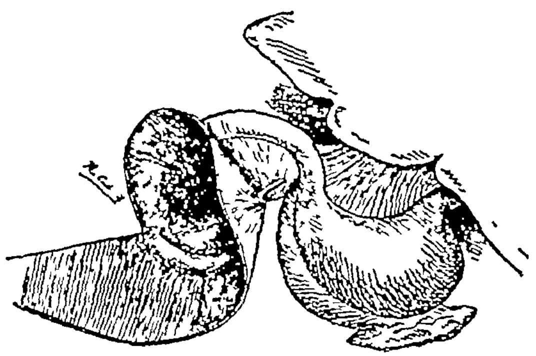

FIG 7—Shows the continuation of the different portions of the mesentery, (after Perignon)

A noticeable feature in the structure of the mesentery in general is the accumulation of fat The fat formation is more apparent in animals than in man Typical samples may be observed in the sheep or especially in the dog The fat accumulates along the blood vessels and is in many animals quite ornamentally arranged in the great omentum The color of the fat is white or yellow In young fatting animals it is apt to be white, but senility increases the yellow color In very early embryos no fat can be seen, even with a strong lens Small accumulations of fat may be observed in embryos in the last of the fourth month and afterward in limited quantities It, however, does not readily accumulate until the last two months of pregnancy, when the infant, in general, acquires fat The fat lobules are contained in the fibrous meshwork of the membrana mesenterii propria The fat mainly accumulates at the base of the mesentery In some cadavers the great omentum will reach, in places, three-fourths of an inch thick and covers the whole visceral organs from view like a thick quilt In some cases on which I have performed laparotomy there was a mighty omentum which buried all viscera beneath it—and this is a great protector against general infective invasion of the peritoneum Fat exists in the mesenteries in accordance with the conditions of the body elsewhere Mesenteric fat appears and disappears with fat in the other portions of the body

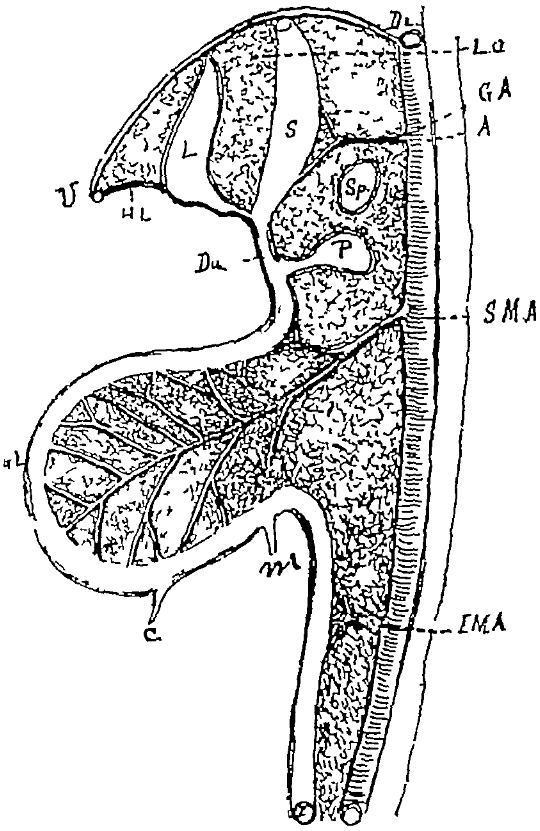

FIG 8—Represents the three distinct divisions of the digestive tube each supplied by a distinct artery S, stomach supplied by the gastric artery, G A, G, L, the great intestinal loop supplied by the superior mesenteric artery, and I, M, A, the inferior mesenteric artery supplies the left half of the transverse colon and the descending colon L shows the growing liver Sp, the spleen and P, the pancreas, A, the aorta C, cecum, M, Meckel's diverticulum, U, umbilicus, H, L, round ligament, L, O, lesser omentum

A good view of the membrana mesenterii propria may be obtained by selecting a spare cadaver After opening the abdomen, carefully tear off the epithelial layer from both sides of the mesentery By a little patience one can easily peel off a thin layer of peritoneum from each side of the mesentery, whence will be left the mesenterii membrana propria, the middle layer of the mesentery, with all its essential structures—vessels, nerves, connective tissue and lymphatic glands This middle layer may also be separated in two layers—one each side of the vessels and nerves The layers seem to me not only to vary, from the amount of contained fat, but also that in a very spare individual much of the connective tissue is absorbed, and that with the regaining of the fat much more connective tissue reappears The two layers of the membrana mesenterii propria decrease in size from the base of the mesentery up to the point of divergence to embrace the bowel At its base it consists of a dense thick mass of connective tissue bundles inclosing the vessels and nerves Its *thickness* and rigidity supports the viscera and maintains definite anatomic and physiologic relations It must exercise considerable influence in the caliber of blood vessels which pass through its meshes and fibrous layers

The lymph glands are not visible in the mesentery of very young embryos Some state that the glands first appear in the fifth month of fetal life They appear, according to Toldt, in the middle of the fifth month The glands lie about the middle of the mesentery and do not seem to produce manifest changes They lie in a series in the mesentery In adult man there are some one hundred and fifty In the lower animals the glands do not assume the scattered and diffuse condition of man but accumulate into a few larger ones In some, there may be one very large gland, and none, or scarcely any visible small ones These mesenteric glands are beautifully shown in a six months infant, dead from some wasting disease

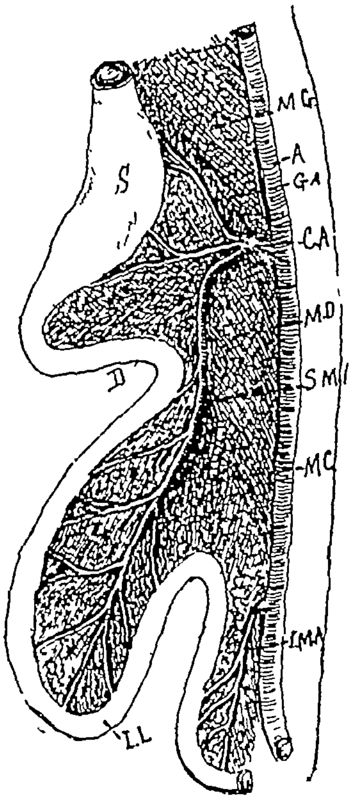

FIG 9—Represents the mesentery suspending an advanced digestive tube S, stomach D duodenum, S, M, A, superior mesenteric artery, I, L, intestinal loop M G, posterior mesogaster C, A celia axis G, A, gastric artery M, D, mesoduodenum M, C, mesentery, I, M A, inferior mesenteric artery A aorta The mesentery 3 divisions with 3 arteries and divisions of the digestive tube, appear in this figure

The two endothelial layers which cover the membrana mesenterii propria, are very thin One can separate them from the middle layer by careful dissection These two thin serous layers consist of fibrous and elastic connective tissue covered by pavement or flat epithelium The fibrous, elastic connective tissue which lies between the single epithelial layers and the membrana mesenterii propria does not have a specially definite arrangement for its fiber bundles It connects the epithelial layer to the subserous beds of tissue Toldt gives a simple layer of endothelial cells, immediately under the epithelium is a thin layer of fibrous connective tissue, mixed with fine elastic fibers, and an extremely delicate and loose subserous tissue which connects it to the membrana mesenterii propria It may be observed that the loose subserous tissue gives the shifting and sliding property to the serous layer The peritoneum can glide on its soft elastic bed Fat is rare in this serous layer

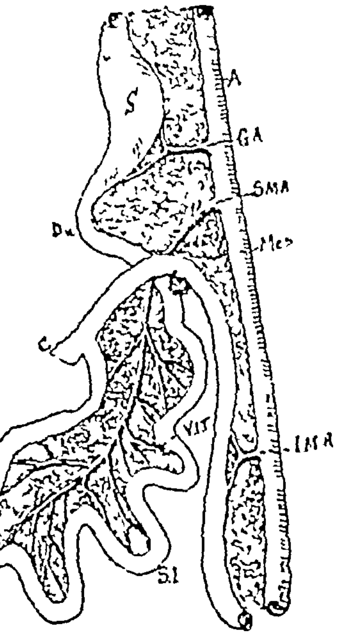

FIG 10—Shows the mesentery with its three arteries and three parts of the digestive tract The great intestinal loop S, I has rotated from left to right and the acquired mesenteries are beginning to arrive the cecum C is on its travels to the right iliac fossa the vasa intestinii tenuis, V, I, T, now diverge to the left, Du duodenum A aorta G, A, *gastric artery* Mes, mesentery S, M, A superior mesenteric artery, I, M, A, inferior mesenteric artery

The mesentery is generally viewed as a double fold or duplication of peritoneum, and that as such it originated But some authors think that the mesentery arose as an independent structure from the cells of the mesoderm adjacent to the vertebral column The author who supports this view with the most originality, so far as we are aware, is Professor Toldt of Vienna Toldt observes that nowhere in the development of the mesentery can one discover a process which can be indicated as a fold or duplicature Nor can the formation of the primitive mesentery be looked upon as a passive extension of a peritoneal fold Toldt says "*Das Wachstum der Gekröse ist Viel mehr ein ganz actives, es schreitet parallel mit dem Wachstum des Darmes fort und beide bedinger sich gegenseitig*" (The growth of the mesentery is moreover an active process, it progresses parallel with the growth of the intestine and each limits the other) The advocates of the theory that the mesentery is an independent growth, put forth the idea that not only the development but also the structure of the mesentery favors its correctness The structure of the mesentery consists of blood vessels, nerves and lymphatics, and these being the fundamental structure of the mesentery it speaks against the view of peritoneal folds or duplicatures The claim is that no simple fold or peritoneum would always contain such fundamental structures The distinct difference between simple peritoneal folds and such structures as mesenteries consists in their contents The constant presence of distinct vital elements is in favor of an independent origin of the mesentery from the mesoderm The structures of the mesentery may be designated as subserous tissue Another point which may be of aid in supporting the independent origin of the mesentery is that a part of the intestine loses its free mobility after early fetal development, as the duodenum, colon ascendens et descendens The membrana mesenterii propria is the union of the vessels, nerves and lymphatics in a subperitoneal tissue

Again, the theory of the independent origin of the mesentery may find support in the view that the great omentum has a similar histologic structure as the only primitive mesentery The great omentum consists of a connective tissue layer covered on both sides with flat epithelial cells, exactly as the primitive mesentery was composed The fibrous elements are relatively scarce the further one goes from the original mesenteric insertion line However, the blood vessels are surrounded by fibrous bundles of connective tissue in the great omentum, but the quantity of fibrous bundles is more limited in distribution It may be asserted that the connective tissue of the great omentum resembles and is analogous to the membrana mesenterii propria So far as I am able to observe, this is a fact, but it is exceedingly thin, as Dr Waite and I proved by actual observation on cadavers fitted for the work The three theories as to the origin of the mesentery may be stated in short as *a*, *coalescence*, *b*, *displacement*, *c*, independent origin from ridges of cells

It may be stated in regard to the coalescence theory, that coalescence or union of surfaces by absorption on epithelial cells is at least not usual The theory of displacement or readjustment is based on the fact that the viscera grew faster than their envelope, the peritoneum, and as far as the theory which attributes the origin of the mesentery to the heaped up ridges of mesoblastic cells situated on each side of the vertebral column, much may be said in its favor The best sample to illustrate the displacement theory of the mesentery is that of the descending colon The rapidly growing kidney pushes itself between the meso colon-descendens and makes according to this view, the external layer of the meso colon overlap the parietal layer, the folds disappear by coalescence of its epithelium The advocates of this theory claim that a white line of coalescence can be found parallel to the descending colon, which, it is claimed, proves the correctness of the theory Microscopic examination would not prove anything because after the coalescence there would be no epithelium left to tell the story of coalescence This theory, which will be contested in the present work is also put forth in regard to the great omentum The small pits and pockets found along the ascending and descending colons are referred to as proof of the coalescence theory I have examined them and do not consider them due to formation of the mesentery by coalescence I think they are due to old peritonitis I have found such pockets which would admit the finger point, but sufficient evidence existed to demonstrate an ancient peritonitis The displacement or readjustment theory of the mesentery has many points in its favor It must be considered that the peritoneum and bowel develop, hand-in-hand The peritoneum is an integral part of the viscera and grows with them The essential condition of existing viscera is peritoneal covering As the viscera grow irregularly the peritoneum will need readjustment For example, the cecum grows rapidly while the appendix atrophies rapidly, hence here a vast readjustment of peritoneum is required and it is accomplished without a break in its surface The typical readjustment or displacement of mesentery is observed when the growing kidneys steal away and appropriate the meso-colon ascendens et descendens When any viscus grows faster than its covering or faster than its adjacent neighbors, some form of readjustment or displacement must arise It appears to me that the statement so generally made by writers that the change from primitive to secondary mesenteric insertions, as being wholly due to secondary coalescence is not all true, but that readjustment or displacement tells a large story The mesentery may not be a conjoint visceral fold, but a neuro-vascular pedicle arising out of the collection of mesodermic cells situated immediately on each side of the notochord and finally becoming modified, being faced by epithelium

It may be asked, Why is the mesentery inserted only on the dorsal wall? It is no doubt due to the immobility and rigidity of the dorso-abdominal wall If the wall were movable no mesentery could insert itself The liver and kidneys aid in immobilizing and fixing the mesentery, Whatever theory is held as to the development of the mesentery, this must be borne in mind, that the serous cavities are due to interstitial fluid pressure and independent action of the adjacent walls Connected with visceral cavities are generally mesenteries, more or less complicated, whose insertions are on the most fixed walls

The blood vessels of the mesentery are single large trunks at the roots In fact, three blood vessels supply the whole digestive tract—the gastric supplies the stomach, the superior mesenteric supplies the whole of the small intestines, except the duodenum, and from the middle of the transverse colon to the cecum, and the inferior mesenteric artery which supplies the left half of the transverse and the descending colon As the gastric reaches the stomach it divides, and supplies the smaller curvature and the esophagus It does not make anatomic arches and loops The superior mesenteric artery arises like the gastric as a single trunk, but it soon begins to branch In early embryonic life, before intestinal rotation, the branches passed to the right, but after rotation the branches pass from the left side of the superior mesenteric artery These branches, ten to fifteen in number, are designated the vasa intestinii tenuis Shortly after the branches of the superior mesenteric artery pass off from the main trunk they begin to anastomose with each other, forming arches and loops In the vasa intestinii tenuis, I have counted as many as five distinct series or rows of loops The anatomic loops lessen in size as they approach the bowel and the artery rapidly lessens in caliber The general number of anatomic loops is three or four, which wonderfully equalizes circulation for different sections of the digestive tube allowing unequal demands of blood As the arterioles leave the anastomotic loops they run for a short distance parallel and on reaching the wall of the gut they bifurcate and encircle the bowel, making vascular rings The vasa intestinii tenuis supplies the mesentery itself with its glands and nerves

The superior mesenteric artery offers many variations I have seen it give a branch to the liver It may take the place of the inferior mesenteric, as it does in many lower vertebrates. It may give branches to the stomach and spleen Its vasa intestinii tenuis may vary in number, size, and loops Hyrtle, in his "Lehrbuch," 17th Ed, 1884, describes a persistent amphalo-mesenteric artery In this case it supplied the rectus abdominalis, anastomosing with the deep epigastric, and finally passed into the suspensory of the liver along the round ligament By care and patience, one can dissect out almost the whole of the superior mesenteric artery in subjects prepared for the work

The inferior mesenteric artery arises from the abdominal aorta about one and one-half inches above its bifurcation It supplies the large bowel from the middle of the transverse colon to the anus It forms anastomotic arches, similar to the superior mesenteric, but less in number and fewer in series The inferior mesenteric artery may vary in its points of origin It may be entirely displaced by the superior mesenteric artery Some anatomists note that it may give off a middle colic It has been noted to give off branches to each umbilical artery Walsham writes that the anastomosis between the middle and left colic arteries may be wanting, as is the normal condition in the ruminants and porcupine "Quain" announces that it may give branches to the liver and kidneys, and Hyrtl saw it arise from the common iliac A peculiar point in regard to the inferior mesenteric artery is that it has close relations with the rectum whose veins anastomose with the portal veins Hence, blood from the rectum can go directly to the liver by way of the portal vein The portal vein collects blood from the digestive tube and carries it to the liver Now it is observed by all who pay especial attention to the peritoneum and its development, that blood vessels make various projecting folds in its mesenteries The vessels project the peritoneum into a ridge, and accompanying this ridge are found corresponding depressions The arteries which are manifest in their production of ridges in the peritoneum are the ileo-colic which produces the plicæ ileocecalis, superior and inferior The ileo-colic sinistra and sigmoidea produce wide depressions between the large branches and also among its sigmoid vascular arcades I have noted depressions one and one-half to two inches in diameter and nearly two inches wide in the vascular arches of the sigmoid One could push this sac-like pouch toward either side of the sigmoid mesentery Such wide depressions might have been produced by pressure, *e g*, the rapidly growing kidney at its lower end, by its projecting against the sigmoid mesentery The long sigmoid might have been displaced against some round projection, *e g*, against the liver, a coil of intestine or the bladder, when the sigmoid mesentery was very thin, yielding and distensible The gastric artery makes a very prominent fold of peritoneum projecting into the lesser omental cavity This is no doubt what Huschke tried to describe as the gastro-pancreatic ligament or omentum In one adult which Dr Waite and I carefully examined, the fold over the gastric artery projected more than an inch into the lesser omental cavity This fold gave a distinct border to the foramen of Winslow on the left

(*To be continued*)

Ocular Diphtheria Treated by Antitoxin—Dr Coppez, in a Brussels medical journal had a good result in one case "The membranes," he says, "seemed to melt like a snowflake in a ray of sunlight" It may reasonably be expected that the invading progress of pseudo-membranous exudation may be early checked by this treatment "Or, better still," says Dastot, "the last two stages of the malady may be suppressed—with all the dangers that attend them" Twenty-four hours should see the subsidence of all menacing symptoms

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SATURDAY APRIL 20 1895

A PROPOSED STEP BACKWARD

We are advised by a reliable authority that the College of Physicians and Surgeons of Baltimore, Md, have filed a proposed amendment to the constitution of the Association of American Colleges, which if adopted, would undo the good work accomplished at San Francisco, providing that graduates after 1898 shall have attended four courses of lectures in different years, before receiving the degree of M D In view of the decided action taken upon this question by the AMERICAN MEDICAL ASSOCIATION at Detroit, and in fact since its organization, we feel it our duty to protest against the position taken by the Baltimore college In this protest we believe we shall have the sympathy and support of 99 per cent of the profession of America There can be no doubt of the attitude of the profession to-day This was well illustrated in the adoption of the RAUCH resolutions by the AMERICAN MEDICAL ASSOCIATION at Detroit, providing that parties holding diplomas of later date than 1890 must have attended at least four courses of lectures before receiving a degree, in order to secure membership in this ASSOCIATION The resolution was adopted *unanimously* The four-year amendment was adopted by the College Association at San Francisco by a vote of 17 to 5, and afterwards ratified by a unanimous vote Minnesota has amended her medical law, requiring attendance upon four courses before admitting parties to an examination to begin practice The Iowa Board of Health has adopted the four-year minimum of requirements, as well as several other States The repeal of the San Francisco amendment will be far-reaching in its pernicious influences upon both the profession and the colleges The present is a period of evolution in methods of medical education in this country, all signs pointing toward an immediate solution of higher medical education in the United States We had hoped to be soon relieved of the repeated jibes of the foreign medical press, that have for years taunted us upon the question of medical education The JOURNAL appeals to the colleges of the country to immediately carry into execution the provisions of the four-year course A failure to do so will result in humiliation and disgrace It is needless to discuss this question from a professional standpoint as the arguments are one-sided Upon investigation it will be generally conceded that no valid argument can be afforded in favor of a repeal of the present provisions of the College Association calling for attendance upon four courses of lectures before conferring the degree of M D

We can not believe that the better judgment of the College Association will permit this backward move, and as the statistics show that the colleges of the highest requirements are now having the largest and best classes, we think the matter of self-interest will have a powerful bearing in preventing such a catastrophe

INSANITY AND LUNACY IN MASSACHUSETTS

The statutes of Massachusetts are not clear in their use of words applicable to mental disease They have, for example, provided for the treatment of the insane charges of the State at "Hospitals for the Insane" at Danvers, Northampton, Taunton, Westborough and Worcester But they are under the government of a State Board of Lunacy The hospitals are models of their kind and the State Board is a hard-working and efficient body, but the latter has not yet found its way clear to shake off the archaic name The full title of this Board is "the State Board of Lunacy and Charity" Its membership is nine, and its members serve without salary Its powers and duties are vast and far-reaching In addition to the insane class, it has to do with almshouses, the State farm, three State schools, juvenile offenders, the boarding out of infants and other minor wards, non-settled paupers, pauper statistics, bastardy among the unsettled, immigrants falling into distress during their first year, and visiting the sick poor The visitation of young girls boarded out in families, is conducted by eighty-one carefully selected lady visitors who reside near enough to their wards, to be cognizant of their needs and the manner of treatment, these ladies receive no salary The board has been in existence about sixteen years, in which time there have been only thirty appointments, only two deaths and only nineteen resignations It speaks creditably for a non-salaried board to show an average resignation list of only one and a fraction per annum

THE ADVANCE OF LABORATORY WORK IN AMERICA

When Lister visited the United States in 1876, and spoke on the subject of antisepsis at the International Medical Congress, there was no bacteriologic laboratory in this country. The impetus given to bacteriologic studies by the practical needs of surgery was first felt in Europe, but although there were many in the field, it was not until the improved methods of laboratory technique had demonstrated bacillus tuberculosis, and the comma bacillus, that the immense practical value of this department of science dawned on the medical world. America was fully aroused and almost simultaneously there sprung into existence laboratories in connection with Harvard, Johns Hopkins, the Hoagland in Brooklyn, the Carnegie, the Loomis, the Chicago Medical College and the Universities of Pennsylvania, and Michigan, and the medical colleges throughout the United States soon found it necessary to give instruction in bacteriology and to provide suitable equipment therefor.

Naturally, independent investigators were developed by the new and interesting fields of discovery that opened before the vision of the enthusiastic workers. Sternberg of the Army, Welch of Johns Hopkins, Prudden and Biggs of New York, Belfield of Chicago, Counselman and Shakespeare were among the earlier of the observers.

Europe, in advance in the original discovery, again led in the new chemic departure made necessary by the investigations of Metschnikoff and his colleagues, showing the life history of bacteria, and the pathologic changes produced by the microbic products. American bacteriologists in general were not well prepared for this chemic phase of the subject, but the name of Victor C. Vaughan stands pre-eminent among the first of our bacteriologic chemists. He was well prepared for this work, by his discovery of the tyrotoxicon and other ptomaines. To-day it is fair to assume that organic chemistry and bacteriology are as well understood in America as in Europe, and that there are a dozen laboratories in which any experiment made in Europe, may be tested with scientific exactness.

Nor is the work of our American laboratories merely imitative. We have passed beyond that stage and the original work of Sternberg, Kinyoun, Theobald Smith, Chittenden, Counselman, Ernst, Einhorn, Ohlmacher, Abbott, McClintock, Long, Gehrman and others, is as closely watched in Europe as we ourselves watch the European observers.

In the field of chemic researches in our laboratories outside of bacteriology, we have had many observers, but none who have conducted to a conclusion more painstaking investigations in physiologic chemistry and in pathologic substances than Joseph Jones, of New Orleans. We can not undertake to mention all of the distinguished American workers in the wider field of general chemistry, such as Smart, of the Army, Remsen, of Baltimore, Haines, of Chicago, but in that field we may point with pride to a long list of expert chemists, and we venture to predict that before the end of a decade, the leadership in laboratory work will be held in the United States. Even as we write, there are more independent original investigators in Chicago alone than there were in the whole United States a decade ago.

The Vermont Microscopical Association announced recently that a prize of $250 will be given by the well known chemists, Wells & Richardson Company, to the first discoverer of a new pathogenic germ. We shall be disappointed if this prize is not awarded to one of our countrymen. C. Smith Boynton, M.D., of Burlington, Vermont, will furnish any information concerning this prize, on application.

THE NOMENCLATURE AND CLASSIFICATION OF DISEASES IN THE NAVY

In our issue of March 23, we published the new official nomenclature and classification of diseases and injuries, directed to be used hereafter by the medical officers of the Army by order of the Surgeon-General, promulgated in Circular No. 3 of March, 1895. It is interesting to compare this with the nomenclature and classification which went into effect on January 1, of this year in the Medical Department of the Navy, by order of the Surgeon-General of the Navy, issued some months before, which we print in this issue.

The naval classification preserves the technical Latin and Greek nosological titles, carefully revised on the ground of facilitating statistical comparison with similar returns by foreign services. The Army system employs English, Latin and Greek designations indiscriminately. Thus, glycosuria, gout and scurvy appear among Army titles, the corresponding Navy names being diabetes, lithemia and scorbutus. Instead of measles and rotheln in the general infectious class of the Army, the Navy has morbilli and rubella.

There are 330 titles on the Navy list against 249 in the Army, but as 19 of the latter are duplicated, appearing under different classes, and as 12 numbers are given to the expression, "other diseases of this class," there are really only 218 specified diseases and injuries in the Army nomenclature.

Class I, Parasites and Parasitic Diseases of the Navy list has not been retained by the Army, trichinosis being classed by the latter with the general infections and scabies and the dermatophyta with local infections. Carcinoma and sarcoma are placed among general infectious diseases in the Army list, and appear among cysts and new growths, Class XII, Navy list.

Venereal diseases, which the Army retains among the general infections, are transferred by the Navy to Class xi, entitled venereal diseases and diseases of the genito urinary apparatus

Debilitas senilis, hemophilia, purpura hemorrhagica and purpura simplex in the Naval Class iii, of constitutional diseases of nutrition are not enumerated in the Army Class ii, diseases of nutrition, general

The several classes iv, Diseases of the Nervous System, v, of the visual apparatus, vi, of the auditory apparatus, vii, of the olfactory apparatus, viii, of the nutritive apparatus, with subsidiary classes 1, of the Digestive Apparatus, 2, of the Circulatory Apparatus—*A*, Blood Vessels, *B*, Lymphatics, 3, of the Respiratory Apparatus ix, of the Motory Apparatus, x, of the Cutaneous Apparatus, xi, Venereal Diseases and Diseases of the Genito Urinary Apparatus are all included by the Army in one general Class iii, Structural and Functional Diseases of Organs, under the subordinate heads *A*, Diseases of the Nervous System, *B*, of the Digestive System, *C*, of the Circulatory System, *D*, of the Respiratory Organs, *E*, of the Genito Urinary System, *F*, of the Lymphatic System and Ductless Glands, *G*, of the Muscles, Bones and Joints, *H*, of the Integument and subcutaneous Connective Tissue, *I*, of Organs of Special Sense, (*a*) of the Eye, (*b*) of the Ear, (*c*) of the Nose

Accidents and Injuries iv, and Unclassified, v, complete the Army classification, while the Navy has xii, Cysts and New Growths, xiii, Injuries, xiv, Extraneous Bodies, xv, Poisons, and xvi, Feigned Diseases

A few other minor differences between the two may be indicated Thus, nostalgia appears among diseases of the nervous system (Army) but it is not specified in the Navy, and directed to be included under the title, melancholia Nausea *marina*, for which it is to be regretted the more exact title naupathia, has not been substituted, is classified with diseases of the nervous system by the Navy, and rabies with general infections, neither appearing in the Army classification Insolation among general injuries (Army) is more appropriately classed as febris thermica and prostatio thermica among diseases of the nervous system (Navy), along with febris continua simplex and febris ephemera, which have no place on the Army list, except among fevers of undetermined causation in Class i, General Infectious Diseases On the other hand, the Army places narcotic poisoning, acute and narcotic poisoning, chronic or drug habit among diseases of the nervous system, while they are not mentioned in the Navy list, but would by analogy be reported among other diseases of Class xv, Poisons Cholera morbus and dysentery are classed as diseases of the digestive system (Army) and among general infectious diseases (Navy) Cardiac irritability and cardiac degenerations are enumerated among diseases of the circulatory system (Army) and not mentioned on the Navy list Anthrax appears among the general infections and carbuncle among the local infections (Army), and carbunculus only among diseases of the cutaneous apparatus (Navy) There are twenty-nine diseases of the visual apparatus specified on the Navy list and but fifteen diseases of the eye on the Army list The classification of neither Service includes herpes zoster and ulcus perforans, although the nervous origin of both diseases which are of frequent occurrence is well-established

The Marine-Hospital Service has for many years followed literally the nomenclature of the Royal College of Physicians of London, a revision of which is now due

COLLECTIVE INVESTIGATION OF THE ANTITOXIN TREATMENT OF DIPHTHERIA

When PROFESSOR VIRCHOW—repudiating the attack of his assistant, DR HAUSEMANN, on BEHRING'S theory of the serum treatment of diphtheria—said "All theoretical considerations must give way to the brute force of these figures," referring to the statistics of the treatment in the Kaiser and Kaiserin Friedrich Hospital of Berlin, the question seemed to be settled as to the general merits of sero-therapy During a given period 533 cases of diphtheria were treated in this hospital, of these 303 were treated with the serum, with a mortality rate of 13 2 per cent, 230 were treated without serum, with a mortality rate of 47 8 per cent A still more striking exhibit was afforded during June and July, when nearly all cases were treated with the serum and the mortality rate was 12 7 per cent "Suddenly," says VIRCHOW, "the supply of serum ceased, as, unfortunately, the very horses from which the serum was taken died The old methods of treatment had again to be resorted to and the results were"—109 cases, 55 deaths in seven weeks, a mortality rate of 50 46 per cent A supply of serum was then obtained from another source, and during the next six weeks 81 cases were treated with *12 deaths, a mortality rate of 14 81* per cent It was the "brute force of these figures" which VIRCHOW said compelled him to recommend the serum, *to* attribute to it "a brilliant therapeutic virtue," to contend that, even if disagreeable by effects were proved to occur occasionally, they were not sufficient to deter him from continuing the treatment, and to counsel that the theoretical explanation of its therapeutic action should be left to the future rather than allow the failure of such explanation to interfere with its practical application

Since then, however, these and similar figures which seemed so convincing have been rudely assailed

Among the most recent of the assailants is Dr Joseph E Winters, of New York City, of whom the *Medical Journal* says "Nobody who knows the medical profession of New York can question Dr Winters' astuteness as a clinician and we do not conceive it to be possible to bring up any circumstance or condition that may reasonably be held to have tended to warp his judgment in this matter " At a recent meeting of the New York Academy of Medicine (April 3) Dr Winters, discussing the papers presented on diphtheria and the antitoxin by Drs Hermann A Biggs, W H Park, C H Peck, George P Biggs and Ira Von Giesen, sweepingly challenged every claim made for sero-therapy attacked the favorable statistics and alleged a number of serious after-effects due to antitoxin septicemia In an experience of 154 cases treated during January, February and March, 1895, in the Willard Parker Hospital he asserted he had never found that the serum exerted the slightest influence for good on a single clinical manifestation —on membrane, pulse, temperature, gland swelling, laryngeal symptoms, etc " Every one of these patients had been examined daily, they had been examined with care and with great solicitude and with the desire to discover some evidence of the virtues ascribed to antitoxin by others " He further opposed antitoxin on account of its " immediate danger to life through its influence on the kidneys and on the nervous system and remotely through its influence on the blood"—basing this last charge, apparently, on the destructive action of horses' serum on the red globules, as reported by L Landois and others

Again Passed Assistant Surgeon Cordeiro, U S N, has just reported to the Surgeon General of the Navy the results of his study of the use of antitoxin in the Berlin hospitals, and concludes that " so far, proof is lacking of the value of antitoxin in the treatment of diphtheria," he adopts the adverse opinions of Kassowitz who says "The burden of proof lies with Behring and his co-workers The world will eagerly and only too willingly receive this proof We know that the former extravagant promises are out of the question, but we should be grateful to have it demonstrated that the serum can reduce the mortality by even 1 per cent As yet we have not the slightest basis on which to found an expectation that fewer children will die in the future of this disease on account of the serum treatment "

In this conflict of opinion there is, obviously, an urgent necessity for the collected and collated experience of the profession, and the Journal offers itself as the medium for the collection of this experience Following the last page of reading matter in this issue, will be found a blank form for reports of cases of diphtheria, treated either in hospital or private practice In order to facilitate comparison with the experience in other countries, this form has been prepared in close accord with that now in use in Germany for the collective investigation undertaken by the *Deutsche Medicinische Wochenschrift*[1] This blank form is believed to be self explanatory, it may be detached without mutilating the rest of the number, and it is hoped that all members of the American Medical Association who have had or may have any experience in the antitoxin treatment will contribute to this attempt to settle the question of its merits

SECTION ON BENEVOLENCE

Our friend Dr Frederick Horner, U S N, retired, writes us concerning the plan he has often urged, whereby a fund may be created for the relief of widows and orphans of medical men He urges the establishment of a " Section on Benevolence " or " Medical Aid Section," reference to which was made in the Journal for May 16, 1891, and April 16, 1892

It is understood that our President, Doctor Maclean, will this year favor the matter, and ask that the initial steps be taken for inaugurating the measure

By a resolution of the Association, passed at Washington in May 1891, a committee was authorized to be appointed on the subject, but it appears that no report was made, although the exhaustive paper of Doctor Horner (see Journal, April 16 1892, p 482) might very well answer such a purpose

We sincerely hope some definite action may be taken at the Baltimore meeting, which will result in the establishment of some such section

The Journal Train from *Chicago* for *Baltimore*, Sunday, May 5, 3 15 p m, *via* Pennsylvania Railroad, is a *special* train, exclusively for the use of the members of the Association and their friends It goes direct to the place of meeting, on limited time and with the finest train service in America There is but one Journal train, and that is *via* the Pennsylvania R R

Papers Read in the Sections —Members are respectfully reminded that papers read before the Sections become the exclusive property of the Association

CORRESPONDENCE

Shall Ingenuity and Invention be Discredited Among Physicians?

Denver, Colo, April 9, 1895

To the Editor —The above is practically one of the important questions which should have been decided at last year's meeting in San Francisco Could it have come to the surface so as to have been voted on separately, the indications were then that the proposition to change the Code in this particular would have carried by a large majority Happily, Dr Quimby, of New Jersey, put in an amendment, separately from all others proposed, which brings this question squarely before the Baltimore meeting Dr Quimby's motion is to "change the Code of Ethics—Duties for the Support of Professional Character—by leaving out the words 'Surgical Instruments,' in second line Clause 5, Article I "

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[1] The Journal is indebted to the courtesy of Dr Julius Schwalbe, one of the editors of the *Wochenschrift*, for a copy of the return blank

To spare the precious time of the meeting and to "hedge" against the possibility of my not being able to be present when this question comes up please allow me to give a few reasons why this change should certainly be made, and the mechanical device or "surgical instrument" be forever divorced from the low company of "a secret nostrum "

As a preliminary let me observe, *with all due respect for* our professional grandmothers who framed the Code and Constitution of the American Medical Association, that the *horizon* of their vision of the possibilities of invention must have been rather narrow The conditions were so different then from what they are now Then, with few inventions made by medical men, and few patents issued to anybody, there was no need apparent to protect any physician in his right to be honored as the originator of anything Now there is every need and the Patent Office is the only reliable criterion by which to decide if a man has even made an original invention To require that a man should prove his title and then deprive him of the only means of so doing *reminds one of that old college song*

"Mother may I go to swim"
Yes my darling daughter
Hang your clothes on a hickory limb,
But don t go near the water '

The question is *not* whether it will *pay for a physician to* take out a patent on an invention Judging by the forty five thousand or more patents already allowed in the United States, and only one in fifteen a financial success, it would probably not pay and the applicant would have a "heap of bother" and considerable expense in return *for the establishment* of his own originality and a possible service he may do his fellow men

Briefly stated, the arguments which seem to me sufficient to warrant this proposed change in the Code are

1 That the intrusion of the words "surgical instruments" is uncalled for and without good excuse It is out of harmony with the rest of the paragraph, *for there is no fraud or secrecy to be avoided*, as *implied with* regard to "secret nostrums" The latter are generally known to be cheats, while the former bear "upon their face" their evidence of worth and fitness

2 The interdiction of "surgical instruments," and by implication probably(?) *mechanical devices* is wrong, because the Patent Office furnishes the only reliable proof that a claimant is entitled to credit

3 The sacrifice in time, thought and expenditure required of a physician is really a *damage* to the medical profession, not to mention the *deprivation to those who depend upon* our aid, because many new things must be made, if at all cheaply by dies and machinery, and manufacturers will demand *protection for their own outlay* Especially is this the case with all hard rubber goods which have to be made in expensive molds

4 The restriction imposed is *unjust* to the physician inventor, because he (co-equal with an outsider) ought to have *the stimulus of credit and profit, if there is any*, in order to make a success of his invention The field is the world and after all the great test of merit is extended use, and the *sources of* profit must be massed and under rightful control in order to secure such introduction to supply demand The writer could *illustrate this point by the failure of meritori*ous, mechanical, surgical inventions which have come short of recognition and use because of the lack of properly sanctioned *pushing of their undoubted* claims upon the attention of those who should employ them Again he could illustrate a *point taken* (3) by stating that he has lately been requested to indorse a poor make of his stethoscope with which it is proposed to undersell the market, and cal*culated* to bring discredit upon an *instrument the* utility of which when properly made is unquestioned And now when he is just finishing an improved stethoscope, made on similar but new lines and measurements, he is warned that he must secure the same by patent, or So and So—manufacturers—will cheapen the thing to capture the trade, regardless of his wishes to hold the instrument *to an even* grade of excellence What shall be *done under such* circumstances? Shall the author take the advice given him by two ex-Presidents of the American Medical Association and get behind a surgical instrument company who will seek protection from the Government for him? or shall he be open handed and boldly *announce* that his own rights in the matter are just the same as those of *any citizen of the* United States, even though he is a member of the American Medical Association?

The best way is to change the blamed paragraph and make it read as though a sane man had originally written it

Yours respectfully, Charles Denison, M D

The Judicial Council

Philadelphia, April 10, 1895

To the Editor —The Journal of the 6th inst contains a criticism of the circular, relative to *advertisements, recently* sent to all members of the American Medical Association by the Philadelphia County Medical Society In the criticism occurs a personal allusion which impels me to request the publication of this letter The Journal says "There are *two direct mis statements in the committee's report* which we are sure they will be glad to have corrected, one *is that the decision of the Judicial Council* was *not given* to them or published We notice that Dr John B Roberts has signed this document, and that he was also Secretary of the *Judicial Council If he failed to notify his associates on the* committee of the action of the Council surely the Journal is not to blame"

It is true that I was a delegate of the Philadelphia County Medical Society to the meeting of the American Medical Association *at San Francisco, and therefore signed the* report made by the delegation after its return to Philadelphia *It is also a fact that I* was and am the Secretary of the Judicial Council of the Association

The circumstance that I held the two positions and *could have disclosed the decision of the Judicial Council to my* associates of the delegation, seems to the Journal a sufficient reason for supposing that I *would* do so Such a betrayal of official confidence would, in my opinion, make me unworthy to be a member of the Council

As Secretary I was directed to *furnish the Board of Trus*tees with a copy of the decision in regard to the publication in the Journal of advertisements of secret preparations I did *this immediately, on June 8, 1894* I was not at liberty to inform any one else, outside of the membership of the Council, not even those who brought the charges *against the* Trustees I therefore have refrained from doing so

You will remember that I declined to be present during *the* executive sessions of the Judicial Council at which the question was considered, because of my official connection with the Society bringing the charges After the decision of the Council had been made, I returned to the room and resumed the duties of Secretary, which during my absences *had been performed by Dr X C* Scott, and Dr T D Crothers respectively acting as Secretary *pro tempore*

Yours truly, John B Roberts M D

Answer —The *decisions* of the Judicial Council are not secret The *proceedings* are secret, but not the *decisions* The copy sent the Trustees was signed by Dr Roberts

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Mountain Air for Cities

Milton, Ky, April 15, 1895

To the Editor —The details of the plan which I suggested in the Journal of March 30, for supplying pure air to cities are as follows Upon a sufficient *foundation is a frame* thirty feet high, within which is an elevator running to top of frame for the purpose of raising the perpendicular sections of steel plate pipes, each of which is twenty feet long, and each one is larger than the one above it to which it is securely bolted, and also of heavier plate *When the first* two joints are securely joined at the top of frame they are elevated until another is added and so on until the *first attains* the desired height Guys are attached and are so arranged as to maintain the pipe perpendicularly

Electric lights could be attached to the top of the pipe, and being at an elevation of six hundred feet would be at least quite conspicuous

The lower end of the pipe is attached *to the* cylinder of a pump which draws the air down through the pipe and forces it through the supply pipes to the desired apartments *These rooms* should be practically air tight except the ventilator at the lower, and the supply pipe at the upper part of the room The air from an altitude of six hundred feet, being so *much* lighter than the impure air at the surface of the earth would force the latter out *of the room*, the temperature of which could be regulated by passing the supply pipes through either cold or hot media A room thus furnished and covered with glass would be an ideal mountain resort

It is believed by some that pathogenic microorganisms, other than the tubercle bacillus, play an important part in the destruction of lung tissue In view of the facts that during sleep the vital resistance of the system is greatly lessened and that the air in all large cities contains innumerable hosts of ferocious pathogenic microbes, the wonder is that there not more pale, wan faces in cities, or even that there should be any one left to tell the tale

It is even hinted that the tubercle bacillus alone is unable to cope with the vital resistance of the system Hence we send our consumptives to a high dry location for pure air But with my plan a high dry location with absolutely pure air is sent to our consumptives

Not only the apartments for invalids but also factories, business offices, store rooms, etc , could have the mountain air, simply by making the upper part of the rooms air-tight

I have thus briefly outlined the plan for supplying cities with pure air of any desired temperature at a trifling cost compared with the benefits to be derived, and I hope to see Chicago—the wonder of the nineteenth century—take the lead in making a test of its practicability

S E Hampton, M D

Quis Custodiet ipsos Custodes?

Chicago, April 13, 1895

To the Editor —At a meeting of the faculty of the Northwestern University Woman's Medical School, the following resolutions were unanimously adopted and ordered to be placed before the Illinois State Board of Health

Whereas, On three occasions within the past three years, the Illinois State Board of Health has licensed to practice medicine in this State, students who have not properly qualified themselves for such duties, and whose incompetence has compelled us to withhold the degree of Doctor of Medicine, and

Whereas, By common report we are informed that the State Board has adopted a similar policy with reference to numerous other persons, therefore,

Resolved, By the faculty of the Northwestern University Woman's Medical School that the State Board be requested hereafter to make its examinations so rigid that persons incompetent to obtain the degree of Doctor of Medicine from first class medical colleges can not obtain license to practice from the Illinois State Board of Health

Resolved, That the State Board of Health be urged to do all in its power to secure a modification of the State law, so that the privilege of examination for license to practice in this State can only be obtained by graduates of recognized medical schools in good standing

Resolved, That for the protection of the lives and health of our people we believe it the duty of the State Board of Health to do all in its power to prevent the entrance into the medical profession in this State of any persons not properly qualified, and further

Resolved, That in the interests of humanity and medical science we believe the State Board should make its standard of qualifications as high as that of the best medical colleges in this country, and that it should do all in its power to aid and encourage the efforts of the profession and the people for thorough medical education and higher requirements of licentiates and for the degree of Doctor of Medicine

Marie J Mergler, Secretary

Shall the Physician Act as Clerk for an Insurance Company without Pay?

Stoughton, Wis , April 11, 1895

To the Editor —I inclose a copy of a letter I wrote to the Wisconsin Benevolent Association which is self-explanatory

Wisconsin Benevolent Association, Milwaukee, Wis

Gentlemen —Your letter of the 11th inst at hand Your statement does not in the least alter the position I have taken

I filled out the blank sent to the patient, giving my diagnosis, number of visits, date of first and last visits, the time patient was confined to the house, etc This is about all that is required of the attending physician, without compensation, by any legitimate accident insurance company and is amply sufficient to establish the justice of the claim so far as the testimony of the attending physician is concerned

The filling out of a complicated blank, such as you inclose, requires time and technical skill, is exclusively for your benefit, and is not under any consideration justly chargeable to the patient The patient has paid you for the insurance, he has also paid me for the medical services rendered during his recent illness It is therefore manifestly unjust, even if it were possible, to collect from him an additional fee for an examination and written report which is solely for your benefit It is impossible for me to answer questions you put in your report without making a much more thorough and complete examination than is required in an ordinary case of a slight acute attack of sickness Take for instance the question "Were there indications of disease of the blood vessels?" Now *it is no easy matter to determine* this, and the question can not be truthfully answered until it is determined The same is true regarding the question asking whether the patient *has had* any disease of the kidneys, liver, lungs, heart, etc To even make a diagnosis of exclusion requires a careful and painstaking physical examination of the patient, a chemic and microscopic examination of the urine and the excretions generally You can readily understand that this takes time and skill. If I am to answer these questions by guessing at it, you are about as competent to do that as I am

I have consulted an excellent attorney regarding this matter and am prepared to sustain the position taken at al hazards There is no way by which you can compel me tc give you the benefit of my knowledge and experience without adequate compensation Very respectfully yours,

J Noer, M D

Antitoxin

Chicago, April 13, 1895

To the Editor —In an editorial of the April 13 number o the Journal, you refer to the case of Bertha Valentine, o Brooklyn, who died ten minutes after the injection o Behring's antitoxin No 2, Op 159, tested Jan 30, 189 April 5, I used Behring's antitoxin, No 2 1,000 and No 2, *Op 159, tested Jan 30, 1895* (note the coincidence of the Op please), upon a 4-year old boy with surprisingly good re sults This seems to me but another link in the chair showing that the cause of death was not inherent in th antitoxin used, for that used by me was *from exactly* th same lot of serum and *cured*, not killed, my case It migh be well to hear from every case upon which Op 159, Jan 3 1895, test has been used

Trusting that my contribution will help dispel the preju dice aroused by this deplorable case, I am,

Yours respectfully, Rosa Engelmann, M D

Answer —This letter is itself evidence of the necessity the collective investigation proposed by the Journal

Fairfield County (Conn) Medical Society

Westport, Conn , April 10, 1895

To the Editor —At the one hundred and third annual mee ing of the Fairfield County Medical Association, held Bridgeport, April 9, the following officers were electe F B Baker, East Norwalk, President, J W Wright, Bridg port, Vice-President, L T Day, Westport, Clerk, C Hexamer, Stamford, Corresponding Reporter Censors M Wilson, Bridgeport M V B Dunham, Greenfield Hill, S Watson, Danbury Very truly yours, L T Day, Clerk

Nu Sigma Nu Convention—Amended Date o Meeting

Detroit, Mich , April 12, 1895

To the Editor —In my letter to you of March 7, having closed a notice of the Nu Sigma Nu Medical Convention f the Journal's last issue, I gave the dates of meeting in Mi neapolis as May 13, 14 and 15 The date has since been chang by Grand Council to June 3, 4 and 5, 1895 So *please ma the correction*, and oblige Very truly yours,

John L Irwin, M D

ASSOCIATION NEWS

The Forty-sixth Annual Meeting

It is the desire of the Committee of Arrangements to iss a complete program of the proceedings for each day, in vance of the meeting Secretaries of Sections should once send to the chairman of the Committee on Printing, W A B Sellman, No 5 E Biddle Street, Baltimore, Md , t titles of all papers to be read in their respective Sections, the order in which they desire them to be read Titles received before April 20 can not be entered on the progra

The hours for Section meetings will be from 3 to 6 P M Some of the Sections will also hold sessions from 9 to 11 A M All the sessions will be held in Music Hall The rooms for the different Sections will be designated on the program

George H Rohe, Assistant Secretary

The Rush Monument Committee

The annual meeting of the Rush Monument Committee will be held in the Stage Reception Room, Music Hall, Baltimore, on Tuesday, May 7, 1895 at 9 30 A M Members of the Committee are requested to be prompt in attendance, to receive the reports of the Chairman and Treasurer

In this connection, attention is called to the importance of more active exertions on the part of the members of the committee to raise the necessary funds to erect the monument to this distinguished physician and patriot The Committee has now upward of three thousand dollars in hand toward this object One of the latest contributions to the fund (1 guinea) was received from the eminent English alienist Dr Daniel Hack Tuke, whose death has just been announced In a letter to the secretary of the committee Dr Tuke manifested a deep interest in the success of the enterprise, and expressed some surprise that the American medical profession had been so slow in the erection of this well deserved memorial to *one of* our medical heroes I may be permitted here to quote the opinion of Dr Tuke concerning Rush

"I am glad to be permitted to contribute my mite to the memorial in honor of one I have always greatly admired It must be confessed that the medical profession of your country has been tardy in publicly recognizing the claims of their most celebrated physician I paid my humble tribute to his memory in 'The Insane in the United States and Canada,' and can only regret that I have not sufficient command of language to describe adequately his originality, his talent, and above all his devotion to the best interests of our race, including the insane In the union of medical skill with active benevolence, I think, as I have said in my book, he was the prototype of Fothergill rather than of Sydenham"

To these eloquent words of the distinguished English alienist nothing need be added We can not however, afford to continue to rest under the imputation that the American medical profession does not appreciate the greatness of the character of Rush, and it is hoped the contributions toward the memorial will be generous at the coming meeting of the ASSOCIATION

A table will be placed in the lobby of the Music Hall during the meeting, at which subscriptions will be received

GEORGE H ROHE,
Secretary Rush Monument Committee

Section on Physiology and Dietetics—Chairman E H Woolsey, Oakland, Secretary, C G Chaddock, St Louis Executive Committee I N Love, St Louis, W T Bishop, Harrisburg, Ephraim Cutter, New York

1 On Food and Thrombosis, by Ephraim Cutter, New York

2 Physiologic Treatment of Tuberculosis by Injection of Serum, by Paul Paquin, St Louis

3 Vital Resistance to Disease, by G W Finley, Harmony, Ind

4 Researches in Rapid Photography by means of Edison's Kinetograph and the animated reproduction by the kinetoscope, showing also by this method the present and future possibilities of taking and reproducing certain animated physiologic movements of the larynx, heart, intestines etc, and certain diseases having visible symptoms etc, with an historical of fifty years of photography by J Mount Bleyer, M D F R A M S, Naples, etc, New York

5 The Influences of Atmospheric Electro Barometric Oscillations, by John North, Toledo

6 The Physiologic and Pathologic Effects of Electricity, with some results of Practical Experience with Electricity, by E H Woolsey, Oakland

The Baltimore Meeting

Indications point to a large and enthusiastic meeting of the AMERICAN MEDICAL ASSOCIATION at Baltimore in May, and we do hope that the questions that have been agitating this body for so long will be definitely settled

What we want is more scientific work, and less squabbling and dickering over ethical matters

It is common rumor that some of the members from Philadelphia and Pennsylvania intend going in force to demand the elimination of advertisements of proprietary medicines from the pages of the JOURNAL, and dire threats are uttered that if their request is not granted they will do awful things—even retire permanently

We express the hope that this rumor is not true, but if true, these men ought to realize the fact that the ASSOCIATION *will not be swayed by threats*, or bulldozing of any kind

If the JOURNAL is to be kept on its feet, all legitimate revenue should be derived from every source obtainable, and *this* source, which is perfectly *legitimate* and *proper*, should be utilized to its fullest extent

Don't handicap the Trustees, but give them full rein to do as they deem best They are not the kind of men to betray any trust the ASSOCIATION may impose upon them

Under Dr Hamilton's able editorship the JOURNAL has so improved that it is scarcely recognizable He has given us a first class JOURNAL and his hands should be upheld

Let us all put our shoulders to the wheel and make this meeting at Baltimore the banner one —*New England Medical Monthly*

Executive or Business Committee

The first meeting of this Committee will be held in Parlor 23 Hotel Stafford on Monday May 6 at 5 P M Subsequent meetings will be held at the same place and hour, unless otherwise ordered by the Committee It is hoped that there will be a full attendance, in order to properly consider matters which may be referred to the Committee by the ASSOCIATION, and for the transaction of such other business as may seem desirable L DUNCAN BULKLEY, M D, Secretary

SOCIETY NEWS

Association of Military Surgeons of the United States—The fifth annual meeting will be held at Buffalo, N Y, May 21, 22 and 23, 1895

The morning session of the first day will be held in the Star Theater at 10 o'clock The morning and afternoon sessions will be held at 9 o'clock and 2 o'clock daily, in a convenient and easily accessible location to all hotels, which will be made known in a later announcement The General Committee headquarters will be in the Iroquois Hotel, where provision will be made for registration

Addresses An Address of Welcome to the City of Buffalo, by the Honorable Edgar B Jewett, Mayor, an Address of Welcome to the State, by the Honorable Levi P Morton Governor and Commander in Chief of the National Guard of the State of New York an Address on behalf of the Medical Profession, by Dr Roswell Park, President of the State Medical Society, an Address by the President of the Association, Brig-Gen George M Sternberg, M D, LL D, Surgeon General U S A, the Report of the Committee of Arrangements, by the Chairman, Major Albert H Briggs, M D, N G N Y

The Citizens' Committee of Arrangements has provided an elaborate and pleasing program for this meeting, and extends a cordial invitation to all members and prospective members to be present and participate in all the exercises, social and literary On Tuesday evening, and also at other times during the meeting the members of the Association as far as practicable will be entertained by hospitable citizens of Buffalo at their private residences and at various clubs An informal hand shake and conversazione will be held at Hotel Iroquois from 9 to 11 P M On the same evening the Committee of Arrangements will also escort to the theaters all visitors so desiring On Wednesday evening a reception will be tendered the members of the Association and their friends On Thursday afternoon, if time and weather permit, a carriage drive to various points of interest in the city On Thursday evening a promenade concert will be given by the band of the 65th Regiment, N G N Y, and a review and regimental parade by the regiment at the Arsenal It is anticipated that a hop will follow these exercises On Friday, leaving Buffalo at 9 30 A M, there will be an invitation excursion to Niagara Falls, and probably on to Fort Niagara This trip will afford the members an opportunity of viewing the various points of interest at the great cataract, including the prodigious electric power plant, which is exciting the attention of the industrial and scientific world also the historic battle grounds of Lundy's Lane and Queenston Heights, General Brock's monument, the Rapids of Niagara, and other interesting places

PUBLIC HEALTH

Latest Circular of the New York City Board of Health on Antitoxin —This Board is now producing 20,000 cubic centimeters of serum each week People unable to pay for the remedy are supplied without charge The arrangements for the sale of the excess product are not quite complete The following is the circular that will accompany the flasks and phials

"The dose contained in No 1 is usually sufficient when the cases are mild and the remedy is administered within the first twenty-four or thirty six hours Phial No 2 contains the average full curative dose In very severe cases, or when the treatment is not begun in a very early stage of the disease, or in any case in which improvement is not marked, the dose must often be repeated twice or thrice, depending upon the symptoms, at frequent intervals of from twelve to twenty-four hours The remedy is administered by deep hypodermatic injections, a special large syringe being preferably employed for the purpose, although an ordinary hypodermatic syringe, carefully cleaned, may be used, the barrel of the syringe being repeatedly filled Some point on the anterior surface of the body should be chosen for the injection, where there is an abundance of subcutaneous cellular tissue, as the anterior surface of the abdomen or thorax, or the outer surface of the thigh Before the remedy is administered the skin should be carefully washed with alcohol or some disinfecting solution The syringe should be carefully sterilized The solution is rapidly absorbed, and it is better not to employ massage over the point of injection When children or adults have been much exposed to diphtheria they may be protected from the disease by the administration of from 150 to 300 antitoxin normal units The protection probably will not last more than three to eight weeks The earlier the preparation is administered the more certain and rapid is the cure In suspicious cases of any severity, and in croup cases, it is better to administer the remedy at once and make a culture at the same time for bacteriologic examination for diagnosis, than to delay the treatment until a diagnosis has been made by bacteriologic examination"

Health Reports —Sanitary reports to the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Louisiana New Orleans, March 30 to April 6, 1 case and 1 death

Maryland Charles County (near Newburgh), 24 cases and 3 deaths reported, April 10

Michigan Detroit, March 30 to April 6, 3 cases

Missouri St Louis, March 1 to 31, 93 cases and 27 deaths, Nodaway, March 1 to 31, 1 case, Lincoln and Pike Counties, March 1 to 31, 20 cases, no deaths reported

Ohio Cincinnati, April 5 to 12, 12 cases of smallpox and 1 case of varioloid

Pennsylvania Philadelphia, March 30 to April 6, 8 cases of varioloid

Texas Fort Worth, March 30 to April 6, 2 cases

Wisconsin De Pere, March 23 to April 8, 1 case (supposed to be contracted through rags in a paper mill), Milwaukee, March 23 to April 6, 13 cases, 4 deaths, April 6 to 13, 5 cases, 1 death

CHOLERA—FOREIGN

India Bombay, March 5 to 12, 1 death, Calcutta, March 2 to 9, 22 deaths, Madras, March 2 to 8, 2 deaths

Turkey Constantinople, January 1 to 31, 14 deaths, February 1 to 28, 108 deaths

SMALLPOX—FOREIGN

Arabia Aden, March 2 to 9, 3 cases

Ecuador Guayaquil, March 8 to 22, 4 deaths

England Leeds, March 23 to 30, 1 case

Germany Prague, March 9 to 23, 13 cases

Gibraltar March 24 to 31, 2 cases

Greece Athens, December 1 to 31, 1 death

Havana Cuba, March 28 to April 4, 10 deaths

Hungary Buda-Pesth, March 11 to 25, 3 cases

India Calcutta, February 23 to March 2, 123 deaths, Singapore, January 1 to 31, 1 death

Mexico Nogales, March 23 to 30, 6 cases

Netherlands Rotterdam, March 23 to 30, 9 cases, 8 deaths

Russia Batoum, March 19 to 26, 6 cases, three deaths, Moscow, March 9 to 23, 6 cases, 1 death, Odessa, March 16 to 23, 1 death; Warsaw, March 9 to 16, 2 deaths

Turkey Constantinople, January 1 to 31, 134 deaths, February 1 to 28, 110 deaths

West Indies San Juan de Puerto Rico, January 9 to 30, 255 cases, 7 deaths, March 6 to April 3, 237 cases, 7 deaths

Havana, Cuba, April 8, 1895

Sir —I have the honor of calling your attention to the mortuary reports recently forwarded to you, in which you will see that as far as the number of deaths from smallpox can indicate the progress of that disease, it has increased very considerably during the last twenty days

It will be seen that during the week ending April 4 there were ten deaths from it, and during the week ending March 28 there were 12, while during the week previously there were none, and for several weeks before that there had been but one or two deaths a week Nearly all of these deaths have occurred in the barrio of San Lazaro, a ward in which many poor people and cigar-makers live, and there the disease seems to be raging like a regular epidemic, for, for every death it is fair to calculate there must be from five to ten new cases No official report of the number of cases of any disease is ever given here

Your cablegram of the 4th inst conveying instructions that whenever there should be an unusual increase of yellow fever to cable you, was promptly received and will be implicitly obeyed, but I am happy to inform you that up to date there has been no such increase, there having been but one death from it during the last week, with three new cases approximately However, in all probability, in view of the large number of unacclimated troops which have arrived, are arriving and will arrive from Spain, there will be much more yellow fever here than usual some time during the coming summer

Very respectfully, your obedient servant,
D M Burgess, U S Sanitary Inspector, M H S

BOOK NOTICES

Publications du Progres Medical Paris 14 Rue des Carmes (Bibliotheque d'Education Speciale) Rapport et Memoires sur l'Education des enfants normaux et anormaux Par E O Seguin Préface par Bourneville Volume 8 de xlviii, 340 pages Price 5 fr

This book is part of a series of the "Educational Library" of the *Progrés Médical* The publication of this volume, with a preface by the talented Bourneville, editor of the *Progrés Médical*, must be extremely gratifying to every American, as it is a collection of memoirs of the late Edward O Seguin, of New York Although Seguin was himself a Frenchman, Bourneville thinks it necessary to introduce him to the French people, which he does in an appreciative preface and fortifies his judgment of the man by a translation of the obsequies of Seguin at New York in 1880, in which Dr Brockett, of Brooklyn, Dr Wilbur, of Syracuse, Dr George Brown, of Barre, Massachusetts, and Dr Marion Sims took part

The first part of the book is devoted to the education of the feeble-minded children, including the rooms in the asylum, the gardens, their plays, methods of instruction, etc The second part is devoted to the education of deaf mutes and discusses the methods of Pereire, of the Anglo Spanish school, the Abbe de l'Epee, and the Anglo American school, as set forth in the writings of Wallace, Braidwood, Bell, Hirsch and others, known as visible speech or lip reading The third part is occupied with a discussion of the best means of education of idiots and feeble-minded The institutions devoted to this benevolent object in all countries are passed in review The fourth part is given to the discussion of popular education of children in various countries, the fourth chapter of this section is given to the metric system, and the author points out its great simplicity and general adaptability

The volume concludes with Dr Seguin's memoirs on idiocy, translated by Dr Bourneville, and the whole constitutes a notable addition to the literature of the subject

Text book of Diseases of the Kidneys and Urinary Organs By Prof Paul Furbringer, translated from the German, with Annotation by W H Gilbert, M D, with a Commendatory Letter from Sir James Granger Stewart In two volumes Volume i, octavo, pages 194 London H K Lewis 1895 Price, $1 75

Prof Paul Fürbringer is Director of the Freiderichshall Hospital in Berlin, who has been known to the profession for many years as an able writer in various departments, particularly in connection with the kidneys and the urine This volume opens with general remarks on albuminuria, hematuria, hemoglobinuria, renal casts, dropsy and uremia, and gives special and particular consideration to the circulatory disturbances of the kidneys, kidney disease in Asiatic cholera, renal affections during pregnancy, engorged kidney, hemorrhagic renal infarctions, inflammation of the kidneys, diffuse nephritis, acute diffuse nephritis, albuminuria in febrile diseases, chronic diffuse nephritis, contracted kidney, amyloid degeneration of the kidney, and infection of the kidneys leading to suppuration

There is absolutely no padding in this book It has been pruned, pared and freed from superfluities until from start to finish it is a solid compact mass of well digested facts To contemporaries, while not always agreeing with them in their conclusions, Fürbringer has been generous, and apparently has never omitted to mention the name of an individual connected with a theory or demonstration of any portion of the subject under consideration In this respect the book is to be commended beyond any that has recently fallen under our observation The deep knowledge displayed by the author, and his candor, should commend the work to all English speaking people

The translator and publisher have done their part well to give the book a handsome setting in its English dress We shall look for the second volume of this work with increased interest We observe with pleasure that the English translator has used the metric system of doses and measurements throughout the book

A Book of Detachable Diet Lists for Albuminuria, Anemia and Debility, Constipation Diabetes, Diarrhea, Dyspepsia, Fevers, Gout or Uric Acid Diathesis, Obesity, Tuberculosis, and a Sick-Room Dietary Compiled by Jerome B Thomas, A B M D Philadelphia W B Saunders, Chicago A C McClurg & Co 1895 Price, $5

This book will save the practitioner a great deal of work and be distinctly to his advantage, as there is every reason to believe that the general dietary is seldom carried out with the same care in private practice that is characteristic of it in hospitals, especially in military and naval service, where, as a rule, the diet is prescribed for the patient even before the prescription is written, and it is made possible with these lists to carry out the diet system in private practice with great ease In addition to the list of articles given there is a collection of sick room dietaries at the end of the book, which gives almost all of the forms of sick-room foods These lists have been printed and bound in a book and perforated, so that they may be torn out when we have a patient to nurse as occasion may require Ten lists are given, namely, those for patients with albuminuria, anemia and debility, diabetes, diarrhea, dyspepsia, fevers, gout or uric acid diathesis, obesity, tuberculosis, and a sick-room dietary

Medical Gynecology A Treatise on Diseases of Women from the Standpoint of the Physician By Alexander J Skene, M D, Professor of Gynecology in Long Island College Hospital, Brooklyn N Y With illustrations 8vo, 529 pages New York D Appleton & Co 1895

The volume is divided into three parts, of which Part i treats of development and growth differentiation of sex, discusses heredity, environment and care in childhood, and mental and physical education Part ii treats of the characteristics of sex and the relations between structure and function, the predisposition to peculiar diseases, and the etiology of diseases of women The diseases of the child-bearing period are also carefully treated In Part iii the menopause and diseases after the climacteric are taken up The observations of a well trained observer like Dr Skene can not fail to be interesting and instructive to the general practitioner, as well as specialist, and we predict that in the present movement against excessive operative treatment in gynecology, its advocates will turn naturally to the work of Dr Skene as a safe one in which the lines between medical and surgical gynecology, although arbitrary, are clearly drawn

A Manual of the Modern Theory and Technique of Surgical Asepsis By Carl Beck M D With 65 illustrations, and 12 full-page plates, 306 pages Philadelphia W B Saunders 1895 Price, $1 25

This book is rather interesting, as it sets forth clearly and distinctly the modern practice of asepsis as distinguished from antisepsis There are sixteen chapters, namely, i, of microbes, ii, of asepsis, iii, means of disinfection, iv, prophylactic disinfection, v, disinfection of instruments and dressings, vi, sterilization of catgut, silk, etc, vii, sponges, drainage tubes and ligation tubes, viii, an aseptic operating room, ix, aseptic wounds, x, infected wounds, xi, aseptic bone wound treatment, xii, renewal of dressing, xiii, technique of aseptic operation, xiv, aseptic injection, xv, anesthesia, xvi, asepsis of private practice There have been several good books on this subject lately, notices of which have appeared in these columns, but the book under consideration is original in many respects We commend it

Cod liver Oil and Chemistry By F Peckel Möller, Ph D London, 43 Snow Hill, E C, Christiana Norway Peter Möller New York W H Schieffelin & Co Copenhagen A T Moller & Co, 508 pages 1895

This well known firm of manufacturers have produced a book of great merit, not alone on account of the novel and interesting information in connection with the fishes and oil, but on account of the advanced chemistry it contains One of the peculiar features of the chemic part of this work is the abandonment of the usual method of representing atomic parts in chemic formulæ and the introduction of a diagrammatic illustration The book is an exceedingly interesting one, and notwithstanding its commercial origin is a distinct addition to medical literature

Transactions of the World's Columbian Dental Congress, in two volumes Edited for the General Executive Committee by A W Harlan, A M, M D, D D S, assisted by Louis Ottofy, D D S Volumes i and ii, paper, pages 1068 Chicago 1894

This handsome set of Transactions records the gathering of the greatest number of prominent practitioners of the dental art, and it is certainly a tribute to the fecundity and the great scope of medical science when one of its youngest departments can prepare and promulgate a scientific work of this character Few realize the immense strides which the art of dentistry has made in the last few years, and although dentists in America were fond of pointing to this and the other one of their number as an example of the high scientific standard which American dentistry had attained, it was reserved for the French Commission, who visited America in 1887, to give to the dentists of the United States the proud position of the first rank in the dental art[1] It was appropriate, then, that this first International Congress should be held in the United States, not only on account of the conceded preëminence of our dental practitioners, but on account of the recognition that has been extended to them as medical practitioners by the American Medical Association Many languages were spoken at this Congress, which have been reduced in the Transactions to four, namely, French, German, Spanish and English The suggestion was made in the closing of this Congress that, owing to the great success of the present one, future dental congresses should be held on each occasion of the holding of an International Exposition This may be said to be the second Congress of this character, the first having been held in Paris in 1889

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[1] Kuhn l'Art Dentaire des Etats Unis Paris, 1888

The papers read in the various sections, along with the discussions, are printed in these volumes, and the work reflects great credit on the editors and the publication committee

King's College Hospital Reports, being the Annual Report of King's College Hospital in the Medical Department of King's College Edited by Nestor Tirard, M D , F R C P , W Watson Cheyne, F R C S , John Philips, M A , M D , F R C P , W D Halliburton, M D , F R S Vol i May 1, 1893, to Sept 30, 1894 Price $1 25 , to non subscribers, 7s 6p London Adlard & Son 1895

It will be seen that this is the first volume of the reports of King's College Hospital and its Medical School The volume opens with an historical sketch of the college and hospital by John Curnow, M D , after which are articles as follows Curable Stage of some Incurable Maladies, by Lionel S Beale , Abstraction of Blood Clinically Considered, by Oliver B Duffin , A Case of Functional Albuminuria, by Nestor Tirard , Psychology of Medicine in Relation to the Medical Practitioner, by Ernest W White , Sneezing, by G McDonald , On the Principle of Selection as Applied to the Administration of Anesthetics, by J Frederick W Silk , On Artificial Maturation of Immature Senile Cataract by Trituration, by Malcolm M McHardy , On Some Cases of Pelvic Suppuration in the Female, by John Philips , Treatment of Gonorrhea and Gleet by Means of the Urethroscope, by F Burghhard , Bursitis, by George Lenthal Cheatle , The Value of the Discoveries of Sir Charles Bell, by William A Turner , after which follow a classified summary of medical cases admitted during the year, notes of medical cases, tables of surgical cases, reports of fatal cases, reports of cases of interest, reports of various departments, the museum, the medical society of the College, report from volunteers, athletic records, and old students' dinner

The illustrations in this book are all good, and some of them excellent It is evident from a perusal of the papers that the work at King's College does not lag behind that of the other large hospitals of London

Report of the Massachusetts State Board of Health upon the Metropolitan Water Supply, February, 1895 Boston Wright & Potter Printing Co 1895

The State Board of Health of Massachusetts, under legislative act of 1893, was authorized and directed to investigate, consider and report upon the question of water supply for the city of Boston and its suburbs within a radius of ten miles from the State House, and for such other cities and towns as in its opinion should be included in connection therewith This exhaustive report has been made in accordance with the law, and it affords an example which should be taken as a model for similar investigations in other portions of the United States We have elsewhere referred to this report (See page 293)

Manual of General Medicinal Technology, Including Prescription Writing By Edward Curtis, A M , M D , Emeritus Profes sor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Medical Department of Columbia College, in the City of New York Third Edition, conforming to the U S Pharmacopœia of 1890 Pocket size (Wood's Pocket Manual Series), 245 pages Price, $1

This little manual, small enough to carry in the pocket, has reached its third edition, which we are informed was made necessary by the changes in the Pharmacopœia of 1890 It is an excellent book and will be found useful for reference In our opinion, however, the author devotes too much space to the old apothecaries' system, which, since the adoption of the metric system in the new Pharmacopœia, has become practically obsolete

Ninth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania By Clarence M Busch , 833 pages 1894

This book includes the report of the Secretary, Dr Benjamin Lee , report and analysis of water samples , reports of epidemics , quarantine , disinfectants, and of the water supplies in various parts of the State There are few boards that work more harmoniously with municipal boards than the State Board of Health of Pennsylvania, and in consequence of this harmony they have been able to accomplish a great deal The volume under consideration deserves to rank among the best of its predecessors

Report of the Commissioner of Education for the Year 1891–92 Vols i and ii, containing Parts i, ii, iii 1294 pages Washington Government Printing Office 1894

The report of the Commissioner of Education is of more than usual interest, and shows in a marked degree the great advances that have taken place in the evolution of the Bureau, which from its humble beginning in 1870, has now the reports on the school systems and university methods of all countries of Europe, comprised in these volumes All those interested in education, either in a special department or generally, will do well to write for the report

The Evolution of the Diseases of Women By W Balls-Headley, M A , M D (Cantab) F R C P (London), 375 pages London Smith, Elder & Co , Melbourne and Sydney George Robertson & Co 1894

This book is intended by the author to be a "Contribution to the Study of the Natural History of Disease " The author's treatment seems sound, even if his pathology is a little hazy at times The work is well illustrated and handsomely printed

Index of Medicine A Manual for the Use of Senior Students and Others By Seymour Taylor, M D , 794 pages Philadelphia Lea Brothers & Co 1894

This book contains in compact form the essentials of medicine, a short chapter on general pathology and general medicine, specific infectious diseases and specific fever, then the diseases of the different regions are taken up It is an extremely convenient book for ready reference

The International Medical Annual and Practitioners' Index A Work of Reference for Medical Practitioners Thirteenth Year Annual, 648 pages , New York E B Treat, 5 Cooper Union Chicago 199 Clark Street 1895

This well known annual contains the usual amount of new matter, as well as improvements and changes of the year Its scope includes the entire range of medicine and surgery and the compilers are experienced literary workers

The Treatment of Wounds, Ulcers and Abscesses By W Watson Cheyne, M B Ed , F R S , F R C S , 197 pages Philadelphia Lea Bros & Co 1895

The author has been long known as one of the advanced men who practice asepsis in surgical work This little work will be useful in furnishing the medical world with the careful style and technique of a master in surgery Every surgeon should add this to his library

Transactions of the American Pædiatric Society Sixth Session, held at Washington, D C , May 29, 30, 31 and June 1, 1894 Edited by Dillon Brown, M D , New York Vol vi, paper Reprinted from the *Archives of Pædiatrics* 1894

These transactions comprise the reports read at the last meeting, held in Washington, 1894 There are eulogies of Drs Keating and Earle by Dr Forchheimer, of Cincinnati, and many interesting papers

The Year-Book of Treatment—1895 Philadelphia Lea Bros & Co 1895

In this year book we have one of the most compact of the several manuals that have been presented for consideration, inasmuch as it is very much condensed and very carefully edited Those desirous of securing in condensed form a summary of the newer systems of treatment brought out during the year will do well to secure this volume

NECROLOGY

BERNHARD GRUNHUT, M D , who was formerly of New York City, is alleged to have lost his life on or about August 22, of last year, when coming to this country on the steamer *Bothnia* His estate, valued at $150 000, has been the subject of a vast amount of litigation Two days before he sailed he made a will leaving $25,000 to his wife and the greater part of his estate, amounting to about $100,000, to the Mount Sinai Hospital, and the Hebrew Benevolent Society of New York There was also $25,000 left to an unborn child, which amount was to revert to the residuary estate, should the child die before it was 21 years old A child was born after the doctor's disappearance from the *Bothnia*, which lived a few hours The contestants, a brother and a sister of the testator, endeavored to show that the Doctor was insane at the time of his marriage, and therefore, mentally incapable of entering into such a contract Counsel for the contestants claimed that if the surrogate held that he had no jurisdiction, all that he could do was to permit them to withdraw On this point the surrogate announced that he would reserve his decision The will was then admitted to probate and the pending issue closed in the surrogate's court The remainder of the estate is divided among a number of small legatees Had the case been continued some interesting expert testimony on insanity would have been given The defense had subpœnaed Dr G Alder Bloomer Superintendent of the State Asylum for the Insane at Utica, and Drs Jacobi Dana and Spitzka, of New York, were among the medical witnesses who were expecting to be called to testify

JOHN W COLES, M D , retired surgeon of the United States Navy, died at his home in Philadelphia, April 6, in the fifty-seventh year of his age Dr Coles was born in New Jersey, on August 14, 1838 Soon after beginning the practice of medicine in May, 1863, he was appointed Acting Assistant Surgeon in the United States Navy from this State, and served in that capacity on the United States Ss *North Carolina* On June 25, 1863, he was made Assistant Surgeon, and was subsequently on duty on the United States Ss *Paul Jones*, of the South Atlantic Blockading Squadron at the Naval Battery, Morris Island, S C , United States ironclad, *Catskill*, of the South Atlantic Blockading Squadron, United States Ss *Pontiac*, at the Naval Hospital, New York , and on the *Bienville*, West Indies On January 14, 1867, he was promoted to Passed Assistant Surgeon, serving at the Naval Academy on the *Lancaster* at Norfolk, Va , on the *Ashuelot* in the Asiatic fleet He also did special service on the United States Ss *Minnesota* from May 7, 1869, and on July 3 1868, was transferred to the Naval Hospital in this city He was promoted to Surgeon in October, 1873, returning to duty at the Philadelphia Naval Hospital He was assigned to the Naval Hospital at Yokohama, Japan, in April, 1875, and on returning to this country in 1878 was detailed on the Medical Examining Board and the National Board of Health at Washington His last service was in this city at the Naval Hospital and as a member of the Medical Examining Board He was placed on the retired list Feb 6, 1885

GEORGE W BATES, M D , died at the residence of his father in Louisville on April 4, of pneumonia Dr Bates was born in Fairmount, Ky , about twelve miles from Louisville, Feb 22 1847 He received his education at Cecelian College where he graduated in 1869 After this he taught school for several years in Carlisle Ind , beginning the study of medicine at the Hospital College of Medicine in 1876 where he graduated Feb 26, 1878 As a result of a competitive examination he received the appointment of interne at the Louisville City Hospital and served one year He was associated for one year upon the beginning of his practice, with Dr Willis He has practiced continually since that date in Louisville He had a chill at the funeral of his father whom he had attended during his illness from pneumonia, and died himself of pneumonia one week later He was a widower but left no children

SWAYNE WICKERSHAM, M D , Chicago, April 16 Dr Wickersham was one of the oldest practitioners in Chicago He was Commissioner of Health under Mayor Cregier For some time his health had been gradually failing Dr Wickersham was a Quaker He was born in the early 30's in Pennsylvania and came to Chicago forty years ago He was a member of the Cook County, State and AMERICAN MEDICAL ASSOCIATIONS He was unmarried and leaves a considerable estate The remains will be taken to the home of his sister at Kennett, Pa , in accordance with his last wish

B G MERRY, M D , of Stillwater, Minn , March 27, aged 62——J H Fuller, M D , of Chattanooga, Tenn , April 2——James Kennedy, M D , of San Antonio, Texas, March 30——J B Morgan, M D , of Joplin, Mo , March 30, aged 72——Peter J Dwyer, M D , of St Paul, Minn , March 30, aged 65——Horace Babcock M D , of Las Vegas, N M , March 25——Thomas Wheat M D , of Manchester, N H , March 25 aged 74——G W Cusick, M D , of Tualatin, Ore , April 3, aged 54——Albert G Anthony, M D , of Oakland, Cal , April 3, aged 50——Carl Hoffman M D , of Baltimore, Md , April 8——H C Baker, M D of Kansas City, Mo , April 8, aged 50——George Gaston Brewer, M D , of Baltimore, April 8, aged 59——B H Harris, M D , of Groveland, Ill , April 6——L C French, M D , of Hudson, Mich , April 12——J T Ball, M D , of Rushville, Ill , April 4, aged 69——L D G Gifford, M D of Watertown, N Y , April 8, aged 88——A H Cochran, M D , of San José, Cal , April 4, aged 64——C D O'Brien, M D of Ackley, Iowa, April 4——L M Tidrick, of Winterset, Ia , April 8——J W Gill, M D , formerly of Louisville, but lately of Danville Ky , died at the latter place after a brief illness, April 2, of pneumonia

MISCELLANY

Change of Address—Dr V L Hurlbut to Wellington Hotel, Chicago Dr S S Adams, to 1 Dupont Circle, Washington

Billroth's Monument—This memorial will soon be placed in the court of honor of the University of Vienna A monument to Skoda and Rokitansky has been also ordered by the Council of the Faculty

Reunion—It is proposed to have a reunion of the class of 1874 of the Jefferson Medical College, on the evening of May 10, in Philadelphia Members of the class who have not received an announcement will please forward their names to E E Montgomery, 1715 Walnut St , Philadelphia

Another "Faith-Cure" Fatality—The coroner at Dayton, Ohio, has held Col F B Mead and his wife to be responsible for the death of their 12 year old daughter, who was by them permitted to be treated by "faith cure" methods, while she was suffering from tubercular meningitis

Health Officer of Chicago—Concerning various rumors afloat, we sincerely hope that the intense desire of Mayor Swift for civil service reform will not induce him to appoint a hod carrier or hotel drummer as Health Commissioner There is a prejudice in favor of having a physician and sanitarian in that office Why not retain Doctor Reynolds?

The Hot-Air Cradle—This is the name given, at one of the New York city charities, the Bowery Mission, to a hot-air chamber, the use of which is to kill the vermin that infest the clothing of a portion of their lodgers When the tramp disrobes for the night, his garments can, if he so desires, be placed in a wire pocket or cradle, and suspended in a hot atmosphere that does such cleansing as may be accomplished by dry heat

Dr T M Drown Chosen President of Lehigh University—The election of Thomas M Drown, M D , etc , to the Lehigh Presidency took place on the 4th inst Dr Drown is a graduate from the medical department of the University of Pennsylvania, class of 1862, at which his ruling passion strong in graduation showed itself in the subject of his thesis, namely, Urological Chemistry Dr Drown has formerly filled the professorship of chemistry at Lafayette College, later at the Boston Institute of Technology He was until recently the chemist of the Massachusetts State Board of Health

Presentation to Professor Sir William Turner—The colleagues and former pupils of Sir William Turner, Professor of

Anatomy at the University of Edinburgh, united in presenting a portrait of himself, as a testimonial of their esteem, respect and appreciation of his unfaltering zeal in the cause of science, and his faithful services to the University of Edinburgh The picture, painted by Sir George Reid, P R S A , is of three-quarter size, and portrays Sir William Turner in a characteristic pose while lecturing Sir James Russell conducted the presentation ceremony which took place in the lecture room April 3, and was the occasion of the gathering of representative academic and medical men of the city

Longevity of Physicians —Dr Salzmann, of Essling, Germany, has made a study of all the available facts regarding the above subject, to be found in the records of his country, going as far back as to the sixteenth century In that century the life period of the medical man was 36 5 years, in the seventeenth 45 8, in the eighteenth 49 8, and in the current century 56 7 The gradual growth of preventive medicine, and especially those measures that have reduced typhus fever and smallpox, has tended to bring about the increased life rate

An English Colony for Epileptics —The *Echo* of London gives an abstract of the work done, during the first eight months, by the National Society for the Employment of Epileptics, which is essentially the record of success "At Skippings Farm, Chalfont St Peters, two or three epileptics were first of all placed, then two or three more, until, by the addition of units, never groups of persons, the number has grown to twenty, thus the family feeling has been preserved The patients vary in age from 18 to 50, and 'most thoroughly repay the unremitting care and attention bestowed on them' The work undertaken at present is, to a large extent, potato growing for market, vegetable gardening, carpentering, building, bootmaking and tailoring"

Measurements of a Selected Venus —Out of five hundred applicants—more or less—for the position of a bronze Venus, in a New York show, one little woman filled the bill, whose measurements are said by her to be the following She thus announces her statistics "One artist says my figure is one of the best that he has ever seen, and I think myself the measurements show up very well I am 5 feet 7 inches in height and weigh 155 pounds My other measurements are bust, 38 inches, waist, 26 inches, thigh, 22 inches, calf of leg, 15 inches, ankle, 9 inches, foot, 9 inches in length My upper arm is 11½ inches, and my neck 13½ inches Many women have figures superior to mine in certain points, but it is a most difficult thing to find a perfect, all-round figure"

Another Survey of the Croton Watershed* —*Filtration Necessary —Representatives of the New York city departments have again visited the Kensico district of the Croton system Their informal reports show that much work is needed to furnish a desirable water from that region The New York *Herald* insists that infiltration beds will need to be constructed before the good name of Croton will be re-established The editor of that paper writes as follows "The inspection was limited in its scope to the Kensico region Kensico is reported 'the least safe of any of the supplies of the water service' But further inspection may reveal other sources of dangerous contamination It should not for a moment be forgotten by any New Yorker that the city's water supply never can be pure until some system of filtration is adopted The most thorough purgation of the Croton basin that can possibly be made would at best be a poor make shift for protecting citizens against polluted drinking water No adequate protection is possible without filtration of all the water admitted to the main pipes The sooner the public understands this and provides for real purification of the water supply the better it will be for the public health"

Increased Losses of Life and Property by Lightning —In Germany, a paternal government controls in large measure the deforestation of the unsettled regions The complaint has been made that this control was neither efficient nor wisely ordered, and that as a result the country was suffering unduly from lightning The following report appears to confirm that view "The director of the statistical bureau at Berlin has written a treatise on the increase of damage caused by lightning and its effects on the human body Among the causes he assigns for increased destructiveness are the extended use of electricity, the changed character of the earth's surface through drainage, denudation of timber, etc, and the constantly increasing use of coal, by which impurities are introduced into the air In Bavaria the annual average of fires caused by lightning was 52 for the period of 1844–1865, while for 1866–1879 it was 103, and for 1880–1882, 132

The Length of the Lower Limbs, Abraham Lincoln's Definition —There is an elaborate symposium in the *Independent*, having for its topic the life and death of President Lincoln Among the anecdotes related of him is the following, which will be new to the majority of our readers On one occasion it is said that some of Mr Lincoln's friends were talking about him and Stephen A Douglas The conversation led to the physical proportions of the respective men and an argument arose as to the proper length of a man's leg During the discussion Mr Lincoln came in and quietly seated himself, and it was agreed that the question should be referred to him for settlement They told him what they had been talking about and asked him what, in his opinion, was the proper length of a man's legs "Well," said he, reflectively, "I should think that they ought to be long enough to reach from his body to the ground"

Crew Space —The Bureau of Navigation calls attention to a recent act which went into effect April 1, 1895 "Every place appropriated to the crew of a vessel must contain not less than 72 cubic feet and not less than 12 superficial feet, measured on floor or deck of that place for each seaman or apprentice lodged therein Such place shall be adequately ventilated, properly lighted, drained and protected from weather and sea, and as far as practicable properly shut off and protected from effluvium of cargo and bilge water, and failure shall subject owner to penalty of $500"

Such place must be kept free from goods or stores under penalty for non compliance

"Sec 3 provisions of this act requiring a crew space of 72 cubic feet per man shall apply only to vessels the construction of which shall be begun after June 30, 1895"

College Commencements

The Atlanta, Ga, Medical College —April 2, one hundred and thirty-five graduates ——Bellevue Medical College, N Y, March 25, eighty-nine graduates ——Tennessee Medical College of Knoxville, March 26, fifteen graduates ——St Louis College of Physicians and Surgeons March 26 forty-nine graduates ——The Omaha, Neb, Medical College, April 3, twenty-four graduates ——The Southern Medical College at Atlanta, Ga, April 3, sixteen graduates Total, 328 graduates

Hospital Notes

The regular monthly meeting of the board of mangers of the New York State Hospital was held in Utica, April 10 The report of the Superintendent showed that there were 1,028 patients in the hospital The twenty fourth annual report of the Mercy Hospital at Davenport, Iowa, shows 164 inmates Nearly $200,000 have been expended on the grounds ——Plans are being prepared for the purpose of building a floating hospital at Providence, R I It is intended for use in contagious diseases ——The St Vincent's Hospital Society of Toledo, Ohio, was organized April 7 This society is formed for charitable purposes, and will aid the St Vincent's Hospital and Orphan Asylum ——The new cottage hospital for the insane at Independence, Iowa, was formally opened April 16

Society Notes

The annual meeting of the District Medical Society of Northwest Missouri was held at St Joseph, Mo, April 11

The following officers were elected for the ensuing year President, D D Bryant, of Savannah, Vice President, W W Carter, of Wathena, Secretary and Treasurer, B M Berry, of Chicopee Falls, Secretary and Treasurer, J M Townsend, of St Joseph The next meeting of this society will be held in July ——A quarterly meeting of the Iowa and Illinois District Medical Association was held in Davenport, Iowa, April 11 ——The Eastern Hampden Medical Association held its fifteenth annual meeting in Springfield, Mass, April 4 The following officers were elected President George T Ballard, of Hampden, Vice President, L M Berry, of Chicopee Falls, Secretary and Treasurer, J M Hannum of Ludlow ——The Snyder County Medical Society held a regular meeting at Selina Grove, Pa, April 4 The following officers were elected President, A M Smith, Vice President, J F Kanawell, Secretary and Treasurer, J O Wagner ——The annual meeting of the Cuyahoga County Medical Society was held in Cleveland, Ohio, April 1 The following officers were elected President, H E Haldeman, Vice President, H C Eyeman, Second Vice-President, W C Weber, Secretary, B F Oswald ——A regular meeting of the Cleveland Medical Society was held April 12 ——The Lehigh County Medical Society met in Allentown, Pa, April 10 Resolutions were passed relative to the prevention of blindness ——The annual meeting of the Oneida County Medical Society was held in Rome, N Y, April 9 The following officers were elected for the ensuing year President, Charles E Smith, Whitesboro, Vice President, Charles G Ward, Utica, Secretary, David Eynon, Utica, Treasurer, H G Jones, Utica ——The Twin City Medical Society held a meeting in Kansas City, Mo April 9 The following officers were elected President, E H Thrailkill, First Vice President, A R Greenlee, Second Vice-President, L A Schaefer, Secretary J N Jackson ——A regular monthly meeting of the Los Angeles Medical Society was held April 5

Philadelphia Notes

Obstetrical Society —The April meeting of the Obstetrical Society had a discussion on the subject of uterine fibroids especially the treatment of this condition when complicating pregnancy Dr Anna M Fullerton of the Woman's Hospital read a paper and presented specimens and photographs, which form a valuable contribution to the subject Dr Geo E Shoemaker reported a case of hysterectomy by ligation for fibroma He also presented a very interesting specimen showing anastomosis of the small intestine by the Murphy button, the operation having been performed eleven months before death by Dr J B Murphy when on a visit to *this city in* September, 1893 It was done originally to close a fecal fistula following strangulated hernia, but the operation was not successful Another attempt nine months later was made by Dr Holmes, to close the fistula by resection and button anastomosis but death resulted from exhaustion

Louisville Notes

Long —Dr John L Long has been appointed expert to the State Board of Health, to be sent any place in the State where smallpox is suspected to exist, and there is no doubt as to the diagnosis The choice is an excellent one and the appointment one of importance, as there has been considerable conflict between local physicians in different parts of the State and the health authorities, when a diagnosis was in doubt Dr Long was for several years Superintendent of the *Louisville* City Hospital but has again entered the practice of medicine, limiting his practice to genito urinary and skin diseases

Death Report —During the past week there was a total of eighty seven deaths, of these twenty six were due to pneumonia, fourteen to consumption, four *to* organic heart disease There were eight still births Forty two were single, thirty eight married sixty eight white, nineteen colored, three died at the City Hospital The percentage *of* deaths from pneumonia still continues enormous

Washington Notes

Medical Society of the District —At the regular meeting of the society held on the 3d inst, the essay of the evening was read by Dr Anita Newcomb McGee, subject, "Esoteric Medical History of the Oneida Community" Twenty-five new members were elected to membership

At the meeting of the society held on the 10th inst, Dr Andrew H Smith, of New York, the guest of the society, read an essay entitled "Some Points in the Physical Examination of the Chest" The discussion was opened by Dr W W Johnston, and continued by Drs Prentiss, Stowell, Adams and others Dr H L E Johnson reported nine successful cases of *laparotomy and presented specimens* Dr G L Magruder reported a case of cancer of the stomach

The Washington Obstetrical and Gynecological Society —The two hundred and twenty sixth meeting of the society was held April 5 Dr T C Smith read the paper of the evening, entitled, "A Case of Hypertrophy of the Cervix Uteri, complicating Pregnancy and Labor" The hypertrophied cervix was amputated post-partum and the woman restored to health The cervix was six inches long and protruded from the vagina An instructing discussion followed Dr H L E Johnson presented an interesting specimen of ovarian cyst removed by himself on the 22d ult The fimbriated extremity was closed, largely distended with fluid, intimately adherent to the cyst wall and the two cavities separated by a very thin septum It was a tubo ovarian cyst in transition stage

Dr S C Busey —The profession will be pleased to learn that Dr Busey, who is confined to bed with a fracture of the right hip, is resting comfortably and is expected to make a speedy recovery

Dr J Ford Thompson, who has been dangerously ill from a septic injury is considered out of danger

Health of the District —The report of the Health Officer for the week ended April 9 is as follows Number of *deaths (still-births* not included), white 55, colored 19, total 104

Fire Escapes for Hospitals —The Commissioners are requiring all hospitals in the District to comply with the law of March 2 by providing suitable fire escapes, stand pipes, red lights, etc

THE PUBLIC SERVICES

NOMENCLATURE AND CLASSIFICATION OF DISEASES

Statistical nomenclature and classification of diseases and injuries Medical Department of the Navy of the United States—in operation Jan 1 1895

Class I —Parasites and Parasitic Diseases

Actinomycosis
Ascaris lumbricoides
Echinococcus
Filaria medinensis
Filaria sanguinis
Oxyuris vermicularis
Pediculus
Pityriasis
Pulex penetrans
Scabies
Tænia
Tinea *favosa*
Tinea trichophytina.
Trichinosis
Other dis's *of this class*

Class II —General Infectious Diseases
(Non venereal)

Cachexia malarialis
Catarrhus epidemicus
Cholera.
Cholera morbus
Denguis
Diphtheria
Dysenteria acuta
Dysenteria chronica
Erysipelas
Febris cerebro spinalis
Febris enterica
Febris *flava*
Febris intermittens
Febris pneumonica
Febris recurrens
Febris remittens
Gangrena nosocomialis
Morbilli
Neuritis endemica
Paralysis *ascendens* acuta
Parotitis epidemica
Pertussis
Pyemia
Rabies
Rheumatismus articularis acutus
Rheumatismus articularis chronicus
Rubella
Scarlatina
Septicemia
Tetanus
Tuberculosis miliaris acuta
Tuberculosis pneumonica acuta
Tuberculosis pneumonica chronica
Tuberculosis of other parts
Typhus
Vaccina
Varicella
Variola
Other *diseases of this* class

Class III —Constitutional Disorders of Nutrition

Anemia
Debilitas senilis
Diabetes *insipidus*
Diabetes mellitus
Hemophilia
Leucocythemia
Lithemia.
Pseudoleucocythemia
Purpura hemorrhagica
Purpura simplex
Scorbutus
Other dis's of this class

Class IV —Diseases of the Nervous System

Apoplexia
Aphasia.
Atrophia muscularis progressiva
Cephalalgia
Chorea
Dementia
Encephalitis
Epilepsia
Febris continua simplex
Febris ephemera
Febris thermica
Hemicrania
Hemiplegia.
Insomnia.
Irratio spinalis
Mania.
Melancholia
Meningitis
Monoplegia
Myelitis
Nausea marina.
Neuralgia
Neurasthenia
Neuritis
Neuritis multiplex
Neurosis hysteroidea.
Paralysis agitans
Paralysis glosso labio laryngealis
Paranoia
Paraplegia
Prostatio thermica
Sciatica
Sclerosis lateralis amyotrophica
Sclerosis lateralis spastica
Sclerosis multiplex
Sclerosis spinalis posterior
Syncope
Torticollis spasmodica
Vertigo
Other diseases of this class

Class V —Diseases of the Visual Apparatus

Achromatopsia.
Amaurosis
Amblyopia
Asthenopia
Corneæ ulcus
Dacryocystitis
Ectropium
Entropium
Myopia
Neuritis optica
Obstructio lacrymalis
Panophthalmitis

Astigmatismus
Blepharitis
Cataracta
Chalazion
Choroiditis
Conjunctivitis
Glaucoma
Hordeolus
Hypermetropia
Iritis
Keratitis
Leucoma
Pterygium
Retinitis
Sclerotitis
Synechia
Trachoma
Other dis's of this class

CLASS VI —DISEASES OF THE AUDITORY APPARATUS

Myringitis
Otalgia
Otitis externa,
Otitis media
Surditas
Other dis's of this class

CLASS VII —DISEASES OF THE OLFACTORY APPARATUS

Antri abscessus
Catarrhus estivus
Rhinitis acuta
Rhinitis chronica
Other diseases of this class

CLASS VIII —DISEASES OF THE NUTRITIVE APPARATUS

SUBSIDIARY CLASS 1 —DISEASES OF THE DIGESTIVE APPARATUS

Adenitis salivosa
Ani prolapsio
Ani rhagades
Appendicitis
Catarrhus gastricus acutus
Catarrhus gastricus chronicus
Catarrhus intestinalis acutus
Catarrhus intestinalis chronicus
Cholelithiasis
Colica
Constipatio
Dentis caries
Diarrhea simplex.
Dyspepsia nervosa
Fistula in ano
Gastralgia
Glossitis
Hematemesis
Hemorrhois
Hepatis congestio
Hepatitis acuta
Hepatitis chronica
Hepatitis suppurativa
Hypertrophia tonsillaris
Icterus
Intestini *recti* strictura
Obstructio intestinalis
Odontalgia
Odontolithus
Esophagostenosis
Parulis
Peridontitis
Periproctitis
Peritonitis
Pharyngitis
Stomatitis
Tonsillitis
Typhlitis
Ulcus gastricum
Uvula descendens
Other diseases *of this* class

SUBSIDIARY CLASS 2 —DISEASES OF THE CIRCULATORY APPARATUS

A—Blood Vessels

Aneurysma
Angina pectoris
Arteriosclerosis
Cordis dilatatio
Cordis hypertrophia
Cordis palpitatio
Cordis valvularum morbus
Embolismus
Endocarditis
Myocarditis
Pericarditis
Phlebitis
Thrombosis
Varix

B—LYMPHATICS

Bronchocele
Lymphadenitis
Lymphangitis
Splenypertrophia
Other diseases of this class

SUBSIDIARY CLASS 3 —DISEASES OF THE RESPIRATORY APPARATUS

Asthma
Bronchopneumonitis
Bronchitis acuta
Bronchitis chronica
Catarrhus bronchialis
Emphysema pulmonalis
Hemoptysis
Laryngitis acuta
Laryngitis chronica
Edema pulmonalis
Pleuritis acuta
Pleuritis chronica
Pleuritis purulenta
Pneumothorax
Other dis's of this class

CLASS IX —DISEASES OF THE MOTORY APPARATUS

Ankylosis
Arthritis
Arthritis deformans
Bursitis
Caries
Contractura
Gangrena
Myalgia acuta
Myalgia chronica
Necrosis
Ostitis
Osteomyelitis
Periostitis
Synovitis
Thecitis
Other diseases of this class

CLASS X —DISEASES OF THE CUTANEOUS APPARATUS

Abscessus
Acne
Carbunculus
Cellulitis
Clavus
Cutis fissuræ
Ecthyma
Eczema
Erythema
Furunculus
Herpes simplex
Herpes zoster
Impetigo
Lichen
Onychia
Paronychia
Pemphigus
Pernio
Pityriasis
Prurigo
Psoriasis
Ulcus
Unguis involutus
Urticaria
Verruca
Other diseases of this class

CLASS XI —VENEREAL DISEASES AND DISEASES OF THE GENITO URINARY APPARATUS

Adenitis inguinalis (venereal)
Arthritis gonorrhoica
Balanitis
Calculus
Chancroid
Cystitis
Enuresis.
Epididymitis
Fistula urinalis
Gonorrhea
Hematuria
Hydrocele
Nephritis acuta
Nephritis chronica
Nephrolithiasis
Ophthalmia gonorrhoica
Orchitis
Paraphimosis
Perinephritis
Phimosis
Prostatitis
Pyelitis
Spermatorrhea.
Syphilis consecutiva
Syphilis primitiva
Urethræ strictura
Urethritis simplex
Urina suppressa
Urinæ retentio
Varicocele
Verruca acuminata
Other diseases of this class

CLASS XII —CYSTS AND NEW GROWTHS

Adenoma
Angioma
Carcinoma
Chondroma
Cystis
Epithelioma
Fibroma
Glioma
Lipoma
Myxoma
Neuroma
Osteoma
Sarcoma
Other *diseases* of this class

CLASS XIII —INJURIES

Abrasio
Ambustio ex calore
Ambustio ex frigore
Asphyxia
Asphyxia ex submersione
Concussio
Contusio
Deformitas
Fames
Fractura
Fulminis ictus
Hernia
Ictus electricus
Luxatio
Membranæ tympani ruptio
Membri clades
Musculi ruptio
Visceris ruptio
Sitis
Sole excoctus
Stremma.
Virium defectio
Vulnus contusum
Vulnus incisum
Vulnus laceratum
Vulnus punctum
Vulnus sclopeticum
Other diseases of this class

CLASS XIV —EXTRANEOUS BODIES

Corpus extraneum

CLASS XV —POISONS

Alcoholismus
Dermatitis venenata
Venenum irritans
Venenum neuroticum
Vulnus venenatum
Other dis's of this class

The form must not be altered by erasure nor interlineation, and the names of the diseases specified shall be employed in classification and *diagnosis* whenever practicable Diseases not included in this table shall be returned as "Other diseases of this class," in the class to which they belong, and, observing the same classification, shall be specified alphabetically in the "Supplementary Table," page 12, care being taken to avoid terms synonymous with those already employed

No symptom shall be considered as the diagnosis of any case when it is practicable to classify it under the disease which is its cause

Each genus shall include its varieties unless the variety appear in the table, *e g*, melancholia includes nostalgia, hypochondriasis, lypothymia, etc , neuralgia includes trigeminal, occipital, cervico-brachial, and intercostal neuralgias, neuralgias of the joints, genitals rectum. etc , but sciatica gastralgia, and certain others occupy places of their own, amblyopia includes hemeralopia, *nyctalopia etc* , *asthenopia includes* asthenopia muscularis, etc , meningitis includes hemorrhagic pachymeningitis, *leptomeningitis*, etc , *alcoholismus includes delirium tremens*, ebriositas, etc , myalgia includes omalgia, lumbago, rheumatic torticollis, pleurodynia etc

In *making a diagnosis, preference shall be given to the primary* disease except where the secondary disease, specified in the nomenclature, *is the main* or only cause of admission to the sick list or retention thereon, or overshadows the primary disease, *e g*., adenitis inguinalis, orchitis, or epididymitis may be the main cause of admission or the only cause of retention on the sick list though co existing with gonorrhea, sclerosis spinalis posterior may overshadow syphilis consecutiva, or *arthritis* gonorrhoica, gonorrhea, etc

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Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from April 6, 1895 to April 12 1895

Capt REUBEN L ROBERTSON, Asst Surgeon is granted leave of absence to and including July 3, 1895, on which date his resignation has been accepted by the President to take effect

Capt James E PILCHER, Asst Surgeon, is granted leave of absence for two months on surgeon's certificate of disability,

Capt WILLIAM B BANISTER, Asst Surgeon, is relieved from duty at Ft McIntosh, Texas, and ordered to Ft Omaha, Neb for duty

First Lieut FREDERICK P REYNOLDS, Asst Surgeon, is granted leave of absence for one month, to take effect upon his relief from duty at the U S Military Academy, West Point, N Y

The following named officers will report in person to Major CALVIN DEWITT, Surgeon President of the examining board appointed to meet at Ft Leavenworth, Kan , on Wednesday, May 1, 1895 at such time as they may be required by the board, for examination as to their fitness for promotion, and upon conclusion of their examinations, *will return to their proper stations First Lieut* THOMAS U RAYMOND, Asst Surgeon First Lieut HENRY D SNYDER, Asst Surgeon First Lieut ALLEN M SMITH, Asst Surgeon, First Lieut JOSEPH T CLARKE, Asst Surgeon

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending April 13, 1895

P A Surgeon G McC PICKRELL, detached from U S S "Newark," and granted three months' leave

Asst Surgeon A W DUNBAR, detached from U S R S "Vermont," and ordered to the U S S "Newark"

Asst Surgeon HENRY LA MOTTE, detached from U 'S S "Newark," ordered home and two months' leave

Asst Surgeon C P BAGG, detached from U S N Hospital, Mare Island, Cal , and to the U S S 'Monterey'

LETTERS RECEIVED

Anderson, Wm Indiana, Pa , Andrews, B J , Burlington, Vt

Bower R W , Socorro N M Breedlove, J W , Fort Smith, Ark , Barr, J Walter, Keokuk, Iowa, Bullard, W M , Wickes, Mont , Biddle, A G , Detroit, Mich Battle & Co , St Louis, Mo

Cutter, John A , New York, N Y , Carter, J M G , Waukegan, Ill , Cone, Andrew, New York, N Y Cook, G F , Oxford, Ohio , Case, W R , Poughkeepsie, N Y

Dering, A R Chicago, Ill , Delanp, S P , New Orleans, La

Eckelman F C Elkhart Ind

Fringer W R , Rockford, Ill , Fehn, Julius, Hoboken, N J Fernan*dez J D* , Jacksonville, Fla

Gorgas, L D , Chicago, Ill , Gores, Dr , Cincinnati, Ohio , Gallup, Benj E , Chicago, Ill

Hanell, R F , Ruston, La Hart, B F , Marietta, Ohio , Hayne, Henry W (2), Lawrence, Kan Hummel, A L (3) Philadelphia, Pa Herald Despatch Co , Decatur, Ill Haralson, H H Forest, Miss , Hakanson, A South Chicago Ill Hutchinson Mahlon Washington, D C , Hengst, D A , Pittsburg Pa , Hartley, Henry A , Chicago, Ill

Jordan, J R , Montgomery, Ala Jelks, J T , Hot Springs, Ark , Jones, W D (2) Rising City, Neb

Kerrick, H C Brocton, Ill Kerr, W W , San Francisco, Cal , Kelly, Galion, Ohio , Kistler, O F , Wilkes Barre Pa

Lyon *D E* , *Dubuque, Iowa Lehn & Fink*, New York, N Y , Lewis, J B , Waseca, Minn , Lea Bros & Co , Philadelphia, Pa , Lundgren, C E , Jamestown, N Y

McCurdy, S L , Pittsburg, Pa , Medical Herald Co , St Joseph, Mo , Miller, DeLaskie, Chicago Ill Malone, Mrs Edw , Waukesha, Wis Marshall Printing Co , (2) Marshalltown Iowa, Marshall, Clara, Philadelphia, Pa , Morgan, Jas Dudley, Washington, D C Morse, Lyman D , Advertising Agency, New York, N Y Matthews, F B , Jacksonville, Fla Maltine Mnfg Co , New York, N Y

Northwestern University Evanston, Ill , North, N L , *Brooklyn, N Y*

Ollino G , San Francisco, Cal

Purnell, J B R , Snow Hill, Md , Plummer, S C Jr , Chicago, Ill , Parke, *Davis* & Co (2), *Detroit*, Mich Porcher W P , Charleston, S C Publisher's Collection Agency, St Paul, Minn , Pennell W W Fredericktown Ohio , *Page* J F , Mystic, Iowa Pollak, S , St Louis Mo

Rational Chemical Co St Louis, Mo , Robinson, R D , Chicago, Ill Rumbold, Thos F San Francisco, Ill , Reynolds, A , Clinton, Iowa

Schonnerhorn, B , Honesdale, Pa Stowell, Chas A Washington, D C Schulze Berge & Koechl, New York N Y Steiger E & Co , New York, N Y Suiter A Walter, Herkimer N Y , Schneck, J , Mt Carmel Ill , Sellman, W A Baltimore, Md , Stewart, F E Detroit, Mich , Stearns, F & Co (2), Detroit, Mich

Turner, S W , Chester, Conn , Tieste, L E , Brooklyn N Y , Trumbauer *Chas* Jesup, Iowa Tylor, O F , Magnolia, Ill , Thorp Edw Y , New York, N Y

Vail, H M Rock Rapids Iowa

Werner, O E , Tigerton, Wis , White Geo, W , Boston, Mass , Western Publishing House, Chicago Ill , Warner, W R & Co , Philadelphia, Pa Webb, J A , Providence, R I West, W F Waxahachie, Texas, Whitten, T J , *Nokomis, Ill* , *Wiggins, J L* , East St Louis Ill

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LECTURES

LECTURES ON INTRACRANIAL SURGERY

VI—BRAIN TUMOR AND ITS SURGICAL TREATMENT

BY EMORY LANPHEAR, M D, Ph D

ST LOUIS MO

Continuing the discussion of brain tumor and its surgical treatment, I will first speak of the

Symptoms of Cerebellar Tumor —Tumor of the cerebellum may give rise to no characteristic symptoms whatever Loomis has reported a case in which there was simply a low grade of fever, yet the post-mortem examination revealed a cerebellar tumor as large as an orange Commonly, however, there are marked symptoms—sometimes so pronounced as to make localization absolutely certain Vomiting with occipital headache and general failure of health, without other discoverable cause, will almost certainly call attention to the proper region, besides, as the tumor grows, pressure symptoms arise They are thus enumerated by Wood "Encroachment on the medulla may lead to imperfect hemiplegia or even to great motor failure, or hypoglossal, or facial, or other local paralysis may result from the pressure exerted by the enlarged cerebellar hemisphere upon nerve trunks If the trigeminus be involved a true anesthesia dolorosa may be produced, loss of power of swallowing may be a prominent symptom On account of proximity to the sight centers, blindness from pressure is not an infrequent result of cerebellar tumors" When the lesion occupies the middle lobe of the cerebellum it causes peculiar disturbances of motion called cerebellar titubation This was typically illustrated in a case that came under my observation in 1890

Annie Buford, colored, 19 years of age, for many weeks presented these symptoms occipital headache, vertigo, vomiting, tenderness over the right occipital region and cerebellar ataxia, reflexes normal her *general condition* was excellent, but she became somewhat thin on account of persistent vomiting, late in the history, choked disc was prominent, cerebellar titubation was marked—she could *only stand with feet* widely separated, as when brought close together she would sway *and* fall to the floor unless caught, but closing the eyes did not cause any increase of the tendency to fall, in walking she could *not turn* quickly, and there was a constant inclination to fall to the right, but *when lying on her back* she had perfect control of the lower extremities Tumor of the middle lobe of the cerebellum was diagnosticated and operation urged It was refused persistently One day while washing dishes *she suddenly fell* to the floor unconscious and died in a few moments The autopsy (by Dr J B *Jones and myself*) confirmed the accuracy of the diagnosis, the tumor was nearly as large as a hen's egg and extended—at the time of death—to the fourth ventricle, so operation during the last few weeks of life *would have* proved fatal, though doubtless early extirpation might have been possible Microscopic examination showed *the* growth to be tubercular in character

The cerebellar titubation is *ordinarily* accompanied by giddiness The attitude is that of a tabetic person, the feet held forward and well separated When they are brought together there is present a singular movement of flexion and extension in the feet, while the body begins to sway, and a fall to the floor follows unless some assistance is afforded Sometimes these movements are in one direction, but more frequently they are irregular, often the patient can not turn suddenly, so *the* walk resembles *that of* a person intoxicated Festination is rarely a symptom When in bed the patient can use the legs as perfectly as ever Nothnagel has clearly proved that this titubation *invariably* means disease of the *middle* lobe of the cerebellum When the cerebellar peduncles are *implicated, rotatory movements appear*

Rosenthal enumerates the diagnostic points of tumor of the cerebellar peduncles as headache, vertigo, disorders of the special senses, unsteady gait with *tendency to fall upon the side, and partial rotation* around the vertical axis

DIAGNOSIS

After a careful study of the symptoms of cerebral and cerebellar growths, as I have given them, there should be little difficulty in making a correct diagnosis The only diseases with which brain tumor can be confounded are cerebral or cerebellar abscess, cerebral thrombosis, meningitis (chronic forms), lead poisoning, hysteria and paretic dementia A chronic basilar meningitis is *particularly misleading* The essential features of each of these diseases and the points of differential *diagnosis may* be found in any good work upon diseases of the nervous system For deciding the location of the lesion, the symptoms already mentioned, coupled with the subjects to be considered later under the head of cerebral localization will suffice

OPERATION

It having been determined that the growth is so situated as to admit of excision, the steps to be followed are these after proper preparation, a flap of scalp and periosteum at least three inches broad is turned back from the area to be opened The trephine is applied and a button removed, or a small opening made with a gouge or chisel, this opening is enlarged until it is at least one and one-half by two inches, with cutting forceps, and the dura inspected while bleeding is being checked The dura is opened by a flap slightly smaller than the hole in the bone, and the brain exposed and examined, especially by palpation, to decide as to the location of the tumor if not at once visible When the situation of the growth has been exactly determined, operative procedures may be resumed

The pia may be carefully raised with the vessels of the brain, the latter slipping out of the sulci without serious rupture in most localities Then the tumor may be removed either with a very thin sharp knife, or curetted away with a Volkmann's spoon, in case of tubercle or *other* soft tumor the latter is prob ably the better method Extreme care must be taken to remove all diseased tissue, which is particularly important of malignant neoplasms Quite often the growth may be readily enucleated—shelled out from the surrounding brain substance, the fibers of which have been simply pushed asunder with no infiltration, in which instance the operation is comparatively simple But when the normal tissues are intimately mixed with the diseased structures there is frequently great difficulty, and the surgeon is compelled to cut at considerable distance from the center of the tumor—if so, as much gray matter should be preserved as possible, the cut slanting inward around the mass to be removeed

When extirpation is completed, a roll of iodoform gauze, wrung from very hot water, is placed in the wound, with firm pressure, to control hemorrhage By making pressure with these hot balls of gauze for about five minutes all capillary hemorrhage can be checked—a method of hemostasis much to be preferred to the Paquelin cautery which is sometimes used It is sometimes necessary to ligate bleeding vessels too large to be controlled by heat and pressure, especially if the cut has extended down near to or into the lateral ventricle If—as sometimes has happened in the past—it is found that the bleeding continues in spite of these efforts, there remains but the alternative of packing (as firmly as dared) with iodoform gauze

As soon as bleeding has been checked the wound is irrigated with hot normal salt solution (temperature 110 degrees) and dried, a plenty of iodoform dusted in, the pia and vessels gently replaced and the dura sewed with fine catgut, with or without catgut drainage as may be indicated—without it by all means if possible A few strands of catgut are laid to the dura and allowed to project through the scalp at the lower end of the incision The scalp is finally closed with continuous catgut suture and the usual dressings applied

If the Paquelin cautery is brought into use to control hemorrhage, the wound must be drained for some four or six days When the wound has to be packed with iodoform gauze for hemostatic purposes the tampon must be removed with the utmost gentleness and under the most scrupulous antiseptic precautions at the end of thirty-six to forty-eight hours After its removal the patient must be kept absolutely quiet for forty-eight hours longer or bleeding may be caused to return [1]

When a cystic tumor is the variety found, the cyst should be extirpated entire if possible The most extreme care is required in pushing away the fibers next to the tumor If, in spite of all precaution, the cyst ruptures, the wound must be immediately and thoroughly irrigated and then the sac of the tumor carefully dissected out to prevent recurrence, this not being possible, it is best to gently curette the remaining cyst wall and insert a drainage tube, as very good results may be thus obtained

All incisions in the white substance should be made parallel with the fibers of the corona radiata—that is practically perpendicular to the lateral ventricle—or as nearly so as practicable

Exploratory puncture may be made in various directions to ascertain the presence of any hard mass when no tumor can be made out by palpation This is to be done with a fine needle When the needle has been run into brain tissue no attempt must be made to change its position until it has been entirely withdrawn, as serious injury to associated fibers would otherwise result The needle may be thrust in again and again without much harm if this precaution be observed—provided that the point is never allowed to come near the base of the brain nor the region of the pons and medulla [2]

If absolutely necessary in order to complete the exploration, an incision may be made down to the suspicious point, this will be rarely called for and should never be done unless urgently demanded The resulting cicatrix may, in certain regions, give rise to serious consequences

If the tumor be found so extensive as to defy removal, the dura is to be closed over it with fine catgut stitches and the opening in the skull enlarged until it is fully two or two and a half inches by four or four and a half—to allow relief from the dangerous and agonizing intracranial pressure

When the tumor is very vascular (as when in the meninges) it becomes necessary to surround it with a number of catgut ligatures before extirpating The gut may be simply passed around the vessels, one by one, with a needle and tied, but when they are not superficial it becomes necessary to pass the sutures deeply into brain tissue with a large curved needle and tie *en masse*, with very little force, these sutures are repeated until the tumor has been entirely gone around, when the cutting can be done in the circle thus made with little hemorrhage except from the under surface—which can be checked after excision is finished

The after treatment is the same as that of any other trephining and will be described in another lecture, when the general subject of head operations is under consideration

CASES

It has been my good fortune to operate upon eight cases of brain tumor—some of them of great interest on account of their rarity as well as the favorable results obtained The first one I will mention is

Angioma of the Meninges—Removal—Recovery—Roy L, of Independence, Kan, 12 years of age, was brought to me Nov 29, 1892 The history showed inherited neurotic tendency, previous health good, was unusually intelligent during early life, but at the age of 3½ years began to have 'night terrors," and after a time epilepsy developed, for the last three years convulsions had been severe and frequent and his mental development very slow, spasms were much more frequent at night and were confined to the right side of the body for months and always began there, even after the culmination in general epilepsy

Examination showed him in excellent physical condition, mental development limited, his language was fairly good, though sharp and quick, and very childish expressions only were employed He had never been able to learn to read His right side was far less developed than the left, and his motions were mostly of the left hand

October 1, I operated at All Saints' Hospital, Kansas City, assisted by Dr T B Thrush and J F Binnie, opening the skull with a gouge and enlarging with cutting bone-forceps until a space two by four inches was cleared over the frontal and parietal regions Upon cutting through the dura a tumor measuring about one and one-half inches across was found growing apparently in the meninges over the upper part of the arm center and the leg center, directly over the fissure of Rolando, as shown in this drawing

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[1] In an operation for epilepsy due to old depressed fracture, (case of Joseph A Barton) I removed the packing from the wounded superior longitudinal sinus at the end of forty eight hours Some hours later during the temporary absence of the nurse the patient rolled out of bed and set up the hemorrhage with fatal results

[2] The normal brain tissue is much softer than generally imagined, and unless the surgeon is thoroughly familiar with the natural consistency of the cerebral structures he should chloroform a dog, open its cranium and carefully practice this exploratory puncture as well as cutting the brain before attempting operation

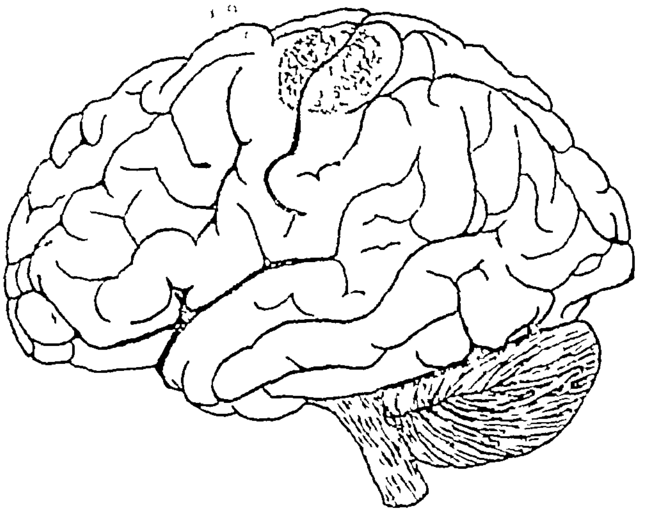


Diagram showing location of angioma cavernosum dark area representing tumor

The mass was firmly adherent to the surface of the brain, whether from inflammatory deposits or from actual involvement of brain tissue in the growth we could not decide, these attachments were broken up without much hemorrhage after the vessels of the dura—which were so enlarged as to resemble varicose veins in their appearance—were tied with catgut at some distance from the tumor The mass itself bled profusely during this manipulation, but the hemorrhage was partially checked by pressure until the entire afferent vessels were tied Then the tumor was excised and all oozing arrested by hot water The dura was brought together as well as possible, much iodoform put in, catgut drainage inserted and the scalp closed in one hour and ten minutes from the first incision

The tumor was angioma cavernosum

December 2 the record says 'Little shock Slept four or five hours No spasms during night, though very restless at times Temperature 99½

December 3, he is reported as having slept all night—something unprecedented for years At 10 A M I found him sitting up in bed playing, with temperature 98 5 degrees

December 10 the dressings were removed and the wound found healed by primary union The general condition was satisfactory and there had been no return of spasms

December 21 he was discharged from the hospital

May 10, 1893, he was reported as still in good health and no convulsions had occurred after his discharge from the hospital

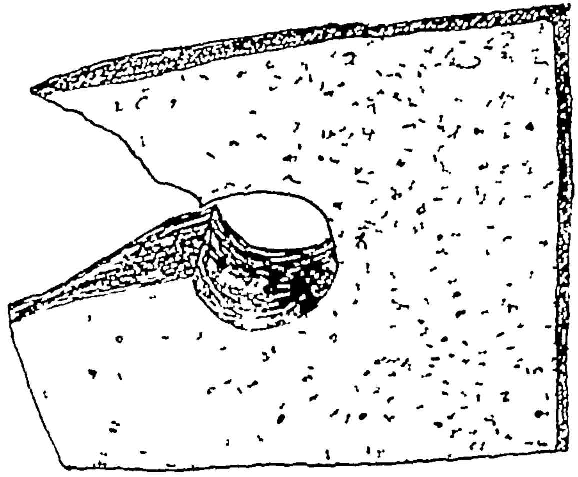
A late report states that the spasms have again appeared

The most surprising thing about this case was the absolutely ideal convalescence After the second day he acted just as if nothing had happened, which was remarkable when we consider the amount of blood which was lost

The second case I wish to mention is one of my two fatal operations for tumor, it presents some peculiar features

Sarcoma of the Dura—Operation—Death —P P B of Norris Mo, aged 28 years, was sent to me by Dr J H Thompson, of Kansas City, August 19, 1892 He gave the following history Family record and previous health good In May, 1885 he was struck upon the head, from which he was unconscious eight hours, this was followed by vertigo which continued *several* days but gradually disappeared, after which recovery seemed complete In May, 1887, he had a severe convulsion which left a partial *paralysis of the left* arm for some days Two hard convulsions had occurred within a few weeks before examination The only symptoms I could find were intense pain in the occipital region, choked disc and disturbance of vision, pupils dilated, mind becoming affected—memory impaired, frequent epileptic seizures limited to the thumb and index finger of the left hand, the muscles of the eyelids and the angle of the mouth, the spasms were followed by a tingling sensation in the same region, no loss of consciousness

August 26 at 9 A M, assisted by Drs J H Thompson and T B Thrush, I made a trephine opening over the region presiding over motion of the implicated muscles, finding the skull a little more than five eighths of an inch in thickness Upon removal of the piece of bone, hemorrhage was terrific, the dura bulged prominently and presented a tumor directly below the hole, I tried to enlarge the opening with Keen's forceps but bleeding was so excessive from the bone and tumor that we had to tampon the wound with gauze to prevent death upon the table So I removed a piece of skull with the Hey's saw, thus



Cut showing shape of piece removed actual size

The hemorrhage was again so exceedingly severe it was evident that death would occur during attempt at removal, so a compress of iodoform gauze was applied in such a way as to completely stop the bleeding and further operation deferred until the patient could rally—operation in two *tempos* being frequently necessary in brain surgery He was put to bed in bad shape, all the usual remedies for shock being employed At 3 P M he was conscious and said the terrible pain in his head had gone much to his relief Pupils were contracted to their normal size for the first time in several weeks Pulse was imperceptible at the wrist He died at 6 30 P M of "shock"—that is, loss of blood at the time of operation There was no bleeding after he was placed in bed

The post mortem examination showed this was sarcoma of the dura which penetrated more than an inch into the brain, but which was readily enucleated Had there been five minutes more of operation the tumor could easily have been removed The location is here shown

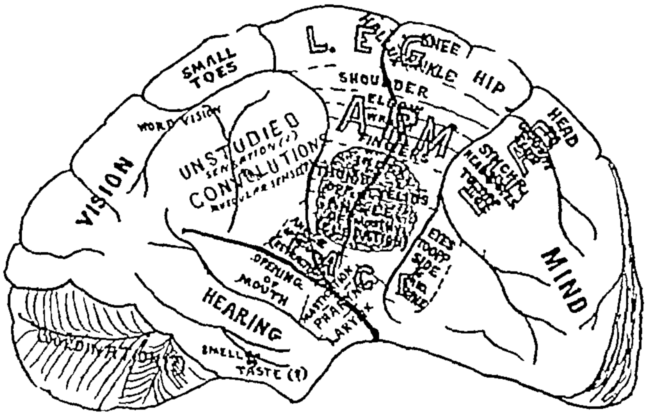


Figure showing known areas in the brain and position of tumor here described—purely diagrammatic

One of the interesting questions pertaining to this case is, Was there any relation between the blow and the development of the sarcoma? We have in the past been taught to believe that trauma is one of the causes of malignant growths, and that a blow which occurred many years before the appearance of the tumor might *still* be regarded as the exciting agent in its history, producing some change in embryonic connective tissue cells which would eventually terminate in sarcoma

If answered in the affirmative, a second question naturally follows did the sarcoma begin its development soon after the injury? There are certain things about the history to lead us to infer that such was the case, *e g*, almost exactly two years after the accident he had a convulsion which left a paralysis of the left arm for some time What was the cause of this epileptic paroxysm in a patient otherwise in perfect health and free from neurotic tendency? Was it an extradural (sub-cranial) hemorrhage, or was it an irritation due to the presence of the tumor already developing? We can only surmise as to the proper answer Slowly growing spindle-celled sarcomata have been reported by a number of observers, Warren in his "Surgical Pathology" (page 718) speaking of sarcoma affecting the parietal bone and its periosteum mentions a sarcoma of the dura which persisted from 1846 to 1866 and says "Other cases of slow growth of these tumors are recorded, one of twenty years, one of fifteen years, and several of four or five years duration" If we take it for granted that this growth began as late as the time of the first convulsion, May, 1887, a period of more than five years elapsed before it caused death

The query then arises, Why did it not occasion serious trouble earlier in its history? The reply I have already given, in the assertion that the brain often shows a remarkable tolerance to slowly increasing growths, and that only when a tumor reaches a size sufficient to interfere with vision is its existence suspected This patient knew there was something "wrong in his head," as he expressed it, for some time, but did not regard it as serious until his eyesight failed He then sought the oculist, who immediately recognized the fearful seriousness of the case, explained that less than two months of life probably remained and advised removal as the only possible escape, unfortunately it was too late

A description of other cases of brain tumor upon which I have operated will prove interesting in illustration of some of the statements I have made, this will therefore be given in the next lecture

(*To be continued*)

ORIGINAL ARTICLES

GASTRO-ENTEROSTOMY, PERFORATION OF THE STOMACH, PERFORATION OF THE INTESTINE, INTESTINAL OBSTRUCTION, AND SOME OF THE LESSONS THEY TEACH

A paper read by special invitation before the Shelby County Medical Society, held at Shelbyville, Ind, April 8, 1895

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It is only a few years since stenosis of the pylorus, intestinal obstruction and gastric and intestinal perforation were considered fatal diseases For the surgeon to have even suggested operative interference under the circumstances would have only been to have incurred censure on the part of the medical profession as well as the laity

During the last decade the advancement of surgical knowledge and the improvement of its technique has enabled the surgeon to invade the abdominal cavity, and handle it with comparatively the same accuracy and confidence that the mechanic controls or repairs a machine

When invited by your secretary to read a paper on this occasion, I was at a loss to know what subject I should select that would be of interest, saying nothing of benefit to the members of this active and progressive Association and its guests on this occasion.

At first thought it occurred to me that gastro-enterostomy would, perhaps, be of some interest, but on more mature reflection, I took the liberty of modifying my subject so as to cover two classes of conditions occurring in the abdominal cavity, and will, so far as I am able, illustrate what I may say on these subjects by specimens, and at the same time draw a few comparisons

GASTRO ENTEROSTOMY

Gastro-enterostomy is usually performed where stenosis of the pylorus exists, whether of carcinomatous, cicatricial, fibrous or other origin It is perhaps more frequently performed for cancer of the pylorus and may be of a radical nature or simply of a temporary character Having determined by the symptoms which are familiar to you all, that obstruction of the pylorus exists, it is not always possible nor is it necessary for the diagnostician to determine absolutely before submitting his patient to an operation, the exact pathologic condition that is producing stenosis From the fact that you have an obstruction, it is sufficient evidence to warrant an operation If during the operation it is satisfactorily determined that the blockade is caused by cicatricial bands or by fibrous contraction of a benign character, it is not usually necessary to make an excision Under these circumstances it is only necessary to "side track," so to speak, this portion of the intestinal canal, by performing a gastro enterostomy and thereby establishing a new opening between the stomach and the bowel

Experimental research has demonstrated that where this can be done, that portion of the bowel which is thereby "retired from active service" becomes atrophied from disuse, and the digestive function of the gastro intestinal canal is, as a rule, re-established through the new channel

If we find by operative interference that we have a malignant growth to contend with, and it is possible to remove it, then it is necessary to perform an enterectomy, and remove all the diseased parts, closing up the stomach as well as the intestine under septic precautions, with a view of giving permanent relief

If the growth is malignant and has involved the adjacent tissues to such an extent as to prohibit its removal, there is nothing left but to perform a gastro enterostomy and contribute to the patient's comfort and length of days As an illustration of this latter condition allow me briefly to report the following case

Mr F B P, age 52, a widower, was admitted to the medical ward of the Protestant Hospital, Columbus, Ohio, Feb 5, 1894, for carcinoma of the pylorus. He was very much emaciated, could retain but little or no food, although hungry and anxious to eat, but when given any kind of food he retained it only a short time when it was ejected from the stomach and in consequence the patient continued the slow process of starvation My attention was called to the case by Dr Adams, who was then in charge of the medical ward, an examination confirmed the diagnosis of obstruction of the pylorus which was probably due to carcinoma. Assisted by Dr Means, he was operated on March 19, 1894, when we found a large carcinoma, which not only caused complete stenosis of the pylorus, but involved so many of the surrounding tissues that it was impossible to attempt to remove it. We therefore performed gastro-enterostomy, using the Senn bone plates. The patient rallied fairly well after the operation, notwithstanding his emaciated and debilitated condition. His appetite soon returned and for a short time he was able to eat and assimilate the more easily digested digested liquid foods, such as milk, beef teas and meat broths, to which were added, by degrees, a more substantial diet, which was not only relished but retained and digested. He was discharged the latter part of May, 1894, very much improved. I followed up the case and found that he was admitted to the Soldiers' and Sailors' Home at Sandusky, on May 29.

Through the courtesy of Dr E M Heard, Assistant Surgeon at that institution, I received the following information relative to this case. After describing his general condition, the Doctor stated that he was nauseated after each meal and unable to take anything but liquids on account of nausea and discomfort. A physical examination revealed a cicatrix in the linea alba, extending from the center of which, was a small tumor of brownish color and firm consistency. Percussion revealed dullness over epigastrium, to right and above incision, about the size of an orange. The patient was put upon supportive treatment but gradually succumbed to the malignant disease and died from inanition on July 14, 1894. An autopsy was held eight hours after death, which revealed adhesions binding the intestines together but the abdominal wall was free. Duodenum firmly adhered to mass at pylorus. Upon opening the stomach, found a loop of black silk engaged in mucous membrane near the pylorus, and an opening admitting a lead pencil from the stomach to the intestines, evidently the result of an operation. At the pylorus was found a tumor broken down at a line corresponding with the junction with the stomach.

We will not take up your time going into further details of this case, except to demonstrate the feasibility of a gastro enterostomy even in advanced malignant disease, which we believe is justifiable, and in a majority of cases will result in giving temporary relief, prolonging life, and also prevent the patient from dying the horrible death of starvation. Last, but not least, it shows what can be done when the peritoneum is protected from septic infection.

PERFORATION OF THE STOMACH

On Dec 24, 1894, I was called in the forenoon in counsel with Dr Adams to see Mrs J M B, age 32, married, no children, whom I found suffering agonizing pain. I inquired of her history and learned that she had suffered from ulceration of the stomach for over ten years, also had been troubled with uterine and ovarian irritation and irregular menstruation. She was in her usual health and attending to her duties about the house until 8 A M, when she was taken with excruciating pains in right shoulder, left side and over the left ovary, also complained of tenderness along the spine. There was no fever, increase of pulse or bloating of the abdomen at 11 A M, when seen by the writer in consultation with the family physician. I was called again at 3 P M, and found the pulse 120, temperature 104, when operative interference was seriously considered, for perforation of *some part* of the abdominal viscera. The obscure symptoms and reflex irritation, together with the history of her previous attacks of a similar character from which she recovered, caused us to hesitate. Subsequently, Dr Baldwin was called in counsel, who agreed with us as to the probability of a perforation, but owing to the acute peritonitis, which had rapidly developed in the last few hours, it was decided that it was inadvisable to operate. The patient rapidly sank and died in twenty-six hours from the time she was first taken with the last attack. A post-mortem was held five hours after death, which revealed a violent general peritonitis the result of septic infection due to a large perforation of the stomach.

In order that you may more fully appreciate the condition which led to the perforation, I have brought the specimen with me and will pass it around for the benefit of those interested. You will observe the marked cicatricial contraction which has taken place about four inches above the pylorus and which has no doubt existed for years, but owing to the low vitality which we always find in cicatricial tissues, necrosis had taken place resulting in perforation and the escape of the contents of the stomach into the abdominal cavity. The practicability of operating on a case of this kind is quite uncertain as you will readily observe by examining the specimen.

You will note there is practically a large and small stomach, which are separated by cicatricial bands, through which the perforation has occurred. It would be quite impracticable to make an excision of this cicatricial portion, unite the lesser with the larger part of the stomach and expect the operation to be successful, and at the same time to attempt to close the opening by a plastic operation, we would have the low vitality which is always present in cicatricial tissue to contend with, which would surely be followed by necrosis and by another perforation.

The only operation which to my mind would present a reasonable chance of recovery in a case of this kind would be to excise the cicatricial band, together with the small portion of the stomach, and then after closing the stomach perform a gastro enterostomy, and even this would be a difficult and hazardous operation, especially so when the abdominal cavity was so thoroughly infected with the contents of the stomach. It has been my experience that general peritonitis due to perforation is usually fatal in a very short time, no matter what you do.

In this connection I recall a case, which I attended while living in Mansfield, of a young man who had been complaining for several weeks of some stomach difficulty for which he had been treating with a homeopath, who had diagnosed it as indigestion. The young man had been at work all day plowing corn, ate a hearty supper, and a few hours afterward complained of a severe pain in the region of the umbilicus. I was sent for about midnight, found him in collapse with every evidence of general peritonitis, hands and feet cold, thready pulse, rapid respiration, etc. I diagnosed a perforation of the stomach with an unfavorable prognosis.

I did not think it wise to attempt an operation, although it was recognized only a few hours from the time the perforation had taken place, owing to the escape of the septic material into the peritoneal cavity, and the violent peritonitis which had already set up The young man died in less than twelve hours from the occurrence of the perforation A post-mortem revealed a perforation of the stomach in the region of the large curvature, sufficiently large to allow me to pass my thumb through it, while the abdominal cavity was filled up with meat, potatoes, corn and other material which he had eaten for his supper

PERFORATION OF THE INTESTINE

Only a few days ago, March 30, I was called in counsel with Dr Emerick to see Mr P, aged 23, a sawyer who gave the following brief history about 5 o'clock P M, March 29, while working on a rip saw he was struck with a board some three feet in length, seven inches in width and an inch in thickness which was hurled from the saw very violently, the end of the board striking him in the right iliac fossa Notwithstanding there was not a mark to be discovered on the abdomen, yet there was all the symptoms of a perforation of the intestine accompanied with the usual prostration and collapse He was admitted to the Protestant Hospital on March 30, and operated on that afternoon Assisted by Dr Means I opened the abdominal cavity and found it filled with fecal matter and enormous quantities of plastic exudation, the result of the most violent septic peritonitis, which had adhered the large and small intestines in one general mass

An opening was found in the ileum about eight inches above the ileo-cecal valve and was sufficiently large to pass the thumb through with ease The abdominal cavity was thoroughly washed out with sterilized water The opening was closed with the Lembert suture, a drainage tube inserted and the abdominal opening closed with interrupted sutures It is scarcely necessary for me to state that this case died in fifty-three hours after the injury and thirty hours after the operation

We gave it as our opinion, before the operation as well as after it, that the prognosis was exceedingly grave, yet, at the same time I feel that it is the surgeon's duty, even in these extreme cases, to give the patient the last chance for escape from death In this case we had some peculiar conditions to which I will now call attention

There was not a mark of any kind to be seen on the skin A small rupture could be felt through the abdominal muscle, but the parietal peritoneum was not torn, yet at the same time, the intestinal peritoneum together with the walls of the intestine sustained a large lacerated wound I have seen several cases of this kind occurring in a similar manner, in which no external violence could be observed, yet the stroke was so severe as to cause a perforation of the intestine, and operation or post-mortem, as the case may have been, revealed a severe lacerated wound of the intestine

INTESTINAL OBSTRUCTION

Intestinal obstruction occurs quite frequently and is always a perplexing problem for the general practitioner He, as a rule, is loth to advise a patient to be operated on, and especially so until he has tried all the remedies at his command from a medical standpoint, to relieve the obstruction We must all admit that the diagnosis of intestinal obstruction is quite difficult to make, even to the expert, in its early stages, how much more so must it be to the general practitioner who sees only a few cases in a lifetime At the same time, I think we must all admit that where intestinal obstruction *does* exist, and where heroic efforts have been made to relieve the obstruction by severe and repeated catharsis and rectal injections, they, as a rule, contribute to the danger of the case by increasing the intestinal peristalsis and peritoneal congestion At the same time, so long as there is no septic infection of the peritoneal cavity it will withstand a great amount of torture without fatal results.

I recall a case of this kind in which I was called in counsel by Dr Adams, the attending physician, and found a lady aged 51 who had been suffering for several weeks with pain in the region of the gall bladder, but during the last few days prior to my visit, had every evidence of intestinal obstruction. The attending physician and I agreed in the diagnosis She was admitted to the Protestant Hospital late on the evening of December 16, was gotten ready for an operation and was operated on the morning of the 17th On opening the abdominal cavity we found the small intestine injected and dilated to fully double its natural size, while the ascending, transverse and descending colon was contracted until it was not larger than the normal ileum

This condition of the intestine was a ready guide to the point of obstruction, and in a few moments I found the blockade, which at this time was complete and existed at the ileo-cecal valve On examination of the cause of obstruction, I found a mass in the small bowel that was movable through the lumen of the intestine, which was filled with liquid matter After having slipped the lump up to a point about a foot above the ileo-cecal valve, I then prepared to open the intestine and remove it Dr Baldwin who was assisting me, very kindly separated, as completely as possible the contents of the intestine from the mass and held the bowel firmly between his fingers on either side of it, at the same time holding the intestine outside of the abdomen to avoid infection

An incision was made in the ileum large enough to allow the escape of the mass which, when removed, was nearly the size of a guinea egg The bowel was thoroughly cleansed, the incision closed with the Lembert suture and the abdominal incision closed and dressed in the ordinary manner The patient made a rapid and uninterrupted recovery and was discharged from the hospital just seventeen days from the time she was admitted On examining the mass (which has now become very much shriveled from desiccation) it was found to be made up of gall stones, fecal matter and apple parings, which in some manner had become cemented together into a firm ball, assuming the appearance of an enterolith and plugging up the ileo-cecal valve, and which would have caused her death had it not been removed At this writing I am informed by Dr Adams, she is enjoying her usual health and is attending to the duties of her household

We do not propose to go into a general discussion of obstruction of the bowel, but we have another case which we wish to report, with a view of drawing some practical, clinical conclusions from this class of cases

On the morning of April 3, 1895, I was called in counsel by Dr Beery who reported to me that he had a case of intestinal obstruction, which was admitted to the Protestant Hospital about 8 o'clock the same morning The patient M B , age 17, a tinner by occupation, reported that he had been troubled for some three years with constipation which at times was very troublesome, and during all this time he had been compelled to take some laxative in order to obtain a movement of the bowels

On Sunday morning, March 31, he felt some colicky pains which grew worse, but his attending physician was not called until the next morning The usual remedies were resorted to for the relief of the obstruction but without avail An examination satisfied the attending physician, as well myself, that we had an obstruction to contend with and consequently an operation was advised With the assistance of Dr Baldwin, the young man was operated on between 9 and 10 o'clock A M on April 3 On entering the abdominal cavity, we found the lower portion of the ileum corresponding with a horizontal line across the umbilicus, collapsed and empty, while that portion above the horizontal line was distended On further examination a firm band about a fourth of an inch wide was found, which extended from the descending colon across the abdomen to the ascending colon on a line with the umbilicus There were neither parietal nor intestinal adhesions, except at each end of this band The end extending to the descending colon was firmly adherent to it, while the other end was firmly fastened to a narrow piece of omentum which in turn adhered to the ascending colon At the juncture of the band with the strip of omentum was found a tumor, which I have the pleasure of presenting to you, about the size of the end of your thumb and which was entirely free from adhesions and had the appearance of an organized hematoma It was pedunculated and hung down from the band like a plum from a twig This band was ligated at each end and removed with the tumor The abdomen was closed and dressed in the usual manner, and the patient is making a rapid and uninterrupted recovery without an abnormal change of temperature or pulse

Our diagnosis as to the character of the tumor was subsequently confirmed by Dr Fraker, the pathologist of the hospital

There are some remarkable features in this case, which have evidently been the result of a hematoma of the omentum setting up a localized inflammation, followed with cell proliferation, building a band in this peculiar manner across the entire abdominal cavity which for years partially obstructed the peristaltic action of the bowels, allowing only the liquid contents to pass, but finally became so firm as to cause a complete obstruction which would undoubtedly have been followed with death had not operative interference been instituted

CONCLUSIONS

In studying these cases from a clinical standpoint we find that they divide themselves into two general divisions

1 Those in which we are warranted in giving a favorable prognosis

2 Those in which we may expect an unfavorable prognosis

In the first case, notwithstanding we had a carcinoma of the pylorus and performed a gastro-enterostomy in an aged party, who was almost devitalized from starvation, yet the result of the operation was favorable, because we were enabled to avoid septic infection In the fourth case we had an obstruction of the intestine, which was occluded by a fecal mass, causing severe enteritis with enormous distension of the bowel, yet by removing the mechanical obstruction aseptically, the patient made an uninterrupted recovery In the fifth case we had a mechanical obstruction of a different type caused by a band, which was also operated on aseptically with the most favorable results

In the second class, consisting of perforations, we have in the two cases reported, two perforations of the stomach, both of which died fram acute, violent, septic peritonitis within a few hours after its occurrence In the third case we had a perforation of the bowel, producing the same general results as those produced by the perforation of the stomach, each one setting up an intense septic peritonitis which resulted in death in a few hours, notwithstanding an operation was performed in the third case for its relief

A study of these cases, leads us to the legitimate conclusion that we are justified in giving a favorable prognosis where there is an obstruction without septic infection but, on the other hand, where there is perforation and septic infection we are not justified in giving a favorable prognosis, on the contrary, we should look upon such cases with fear and trembling

In conclusion, allow me to repeat that I believe it is the duty of a surgeon, even in the face of the grave conditions which usually arise in perforation of the stomach or intestine, to operate and to seek to make the operation at the earliest possible moment after the accident Without an operation we have nothing to hope for With an operation there is a possible chance of saving a human life

150 East Broad Street

TUMORS OF THE EYEBALL

(EXHIBITION OF SPECIMENS)

Read at the meeting of the Tri State Medical Society, St Louis, April 4, 1895

BY WILLIAM H WILDER, M D

PROFESSOR OF OPHTHALMOLOGY CHICAGO POLICLINIC PATHOLOGIST AND ASSISTANT SURGEON ILLINOIS EYE AND EAR INFIRMARY OCULIST TO WESLEY HOSPITAL CHICAGO

The study of tumors of the eye is of the greatest importance to the general practitioner, as well as to the specialist, for the reason that not only is the special sense endangered, but the life of the patient frequently depends upon the early recognition and prompt treatment of a neoplasm of this part Our time will not allow a consideration of the tumors affecting the lids, lacrymal glands and other adnexa of the eye, but it is the purpose of this paper to discuss briefly the most frequent growths that attack the eyeball

Tumors affecting the cornea primarily are, from the nature of this structure, exceedingly rare Usually they spring from the edge of it where the conjunctiva passes over into the epithelial layer of the cornea Of the benign growths may be mentioned dermoid, which is usually situated at the limbus, involving both conjunctiva and cornea Rarely it is seen on the cornea alone, as was the case with the small microscopic specimen shown here It appears as a grayish, or yellowish white, rounded mass varying in size from half a grain of wheat to that of a hazel nut or even larger It is usually single but it may be a double growth Its surface is smooth and may be sprinkled with fine hairs It is of congenital origin and supposed to be caused by an inversion of the epiblast It is seldom cystic, as are dermoids of other parts, but is a solid growth containing hair follicles, elastic fibrous tissue, sebaceous glands and other histologic parts of cutaneous tissue It is not malignant, and although growing slowly, is not likely to recur after a thorough removal

The irritation of the eye from the scratching of the hairs, and the unsightly appearance of the growth, however small, usually bring the patient promptly to the surgeon The growth should be cautiously shaved off the cornea with a cataract knife, and the base lightly touched with a cautery if it should show signs of recurrence

The malignant tumors that affect the cornea are sarcoma and epithelioma Sarcoma, seldom, if ever, begins primarily in the cornea, but takes its departure from the limbus or sclero-corneal margin It is almost invariably pigmented, of the type known as melano-sarcoma, and makes its appearance at times in a small pigmented spot which may have been thought harmless This part of the eye normally contains pigment, more noticeable in a person of dark complexion, in whom a distinct ring around the cornea may sometimes be seen It does not always infiltrate the cornea, but often grows over it, although it can be demonstrated that the epithelial layer of the cornea passes up on to the tumor It presents either a smooth or a lobulated dark brown appearance, is firm to the touch and bleeds easily because of its great vascularity Often a tumor in this situation is an outgrowth from a similar mass inside the eyeball, that has infiltrated the ciliary body and sclera and extended its ravages to the structures on the outside of the globe The prognosis is grave

Epithelioma is a rather frequent type of growth in this neighborhood This may be explained, according to Fuchs, by the predilection that epithelioma has for attacking those parts where the epithelial covering changes its character as it passes from one part to another Examples are familiar in the frequency of epithelial growths about the anus, the lips and the eyelids We have an analogous condition in the limbus, where the epithelium of the conjunctiva passes over to that of the cornea A small nodule appears at the junction of cornea and conjunctiva, and grows sometimes with great rapidity Although occurring in advanced middle life, it does not invariably do so, according to Saemisch, but may also occur in young individuals This growth spreads over the cornea, but does not infiltrate it except when it is quite advanced Even then it is quite easily removed from the subjacent corneal structure It presents a grayish white, nodulated, sometimes distinctly papillated appearance, and is accompanied at times with severe pain Often these epithelial cancers are deeply pigmented and this form grows to a great size, separating the lids and projecting from the palpebral fissure

The question of attempting to save the eye, when sight is not affected, by carefully dissecting away an epithelioma or sarcoma from the cornea is an important one When the growth is small and has not invaded the corneal or scleral tissue, it may be tried with some hope of success, but I am skeptical that anything short of enucleation will suffice to check these malignant growths Under the microscope is a section of a small epithelial growth, removed about eighteen months ago from right cornea of a patient in the Illinois Eye and Ear Infirmary, but as he never reported again it is not known with what result

It should be remembered that the nodule may be an outgrowth from an intra-ocular neoplasm The danger of mistaking such a case for a localized sarcoma of the scleral region is not great if reasonable care is practiced

Tumors of the iris are not common Tuberculosis affecting this part appears usually in the form of reddish-gray tubercles situated at the root of the iris These coalescing may form a distinct nodular mass, and with the increase of the growth there may be considerable pain, pericorneal redness and exudation into the anterior chamber The growth may perforate the cornea or sclera

Sarcoma of the iris may be of the pigmented or white variety, the former is the more frequent as well as more malignant The disease may occur at any age, as a primary tumor of the iris it is rare, being usually an extension of a growth from the ciliary body When the growth is of the melanotic type it is easily diagnosed When of the white variety it may be confounded with tubercle, gumma or cyst of the iris The former will probably show a conglomeration of tubercles of a dirty grayish color, situated at the root of the iris, a gumma will not be so distinctly circumscribed and there will be a syphilitic history, while a cyst will show a pearlish reflex quite characteristic

These growths may be so small and circumscribed as to make it possible to successfully remove them by an iridectomy This should be large enough to excise a considerable portion of the healthy iris around the tumor At the first sign of recurrence, enucleation should be performed to prevent further spread of the disease Cysts of the iris may be caused by either cysticercus or by the implantation of epithelial masses in the iris after a wound We shall omit the consideration of them, as well as of nævi, which are congenital black patches or elevations and extremely rare

Of all tumors affecting the eyeball, those most to be dreaded occur in the choroid, ciliary body and retina According to Noyes, tumors of the choroid are met about once in fifteen hundred eye cases Eighty-five per cent of such tumors are said to be sarcomata, and of these the greater number are pigmented Sarcoma may also spring from the uveal portion of the ciliary body (Lawford and Collins in an examination of one hundred and three cases, report six affecting the ciliary body, one in the iris, two affecting both choroid and ciliary body, and ninety four originating in the choroid behind the ciliary body) Usually the growth attains a considerable size before it is recognized, unless affecting primarily the region of the yellow spot, in which case the impairment of sight brings the patient promptly to the physician It is customary to divide the clinical history of these cases into four stages, according to Knapp

1 A period of early growth before there is any irritation

2 A period of inflammation

3 Perforation of the eyeball and extension of the tumor outside the eye

4 Metastasis

In the first stage there may be no symptoms unless, as said before, the tumor encroaches on that part of the eye which is used for distinct vision. In this stage there may or may not be increased tension, although, as a rule, it is increased. If the physician is fortunate enough to see the eye during the first stage he may, by an ophthalmoscopic examination, discover the growth. He will then see a mass within the eye with a comparatively smooth surface, over which the retina is seen to pass. The retinal vessels are convoluted because of the lobular condition of the tumor, and the retina itself is bluish gray in color. A careful examination with a bright light may show that the tumor is vascular. The duration of the first stage varies from six months to four years. Fuchs found the average to be in sixty-seven cases, twenty-one months.

Most authors have found that males are affected rather more frequently than females. According to Lawford and Collins, 57 per cent of the former and 43 per cent of the latter are affected.

This is a disease occurring generally after the fortieth year; the average age of the 103 cases of Lawford and Collins was 48.42 years. The average of 259 cases reported by Fuchs was 44.2 years. The average of cases reported by Freudenthal was 49.4 years.

With the beginning of the second stage there are *signs of inflammation*. The eye becomes painful and tender on pressure, the tension is increased, ciliary region injected, anterior chamber shallow and all the symptoms of acute glaucoma are present. In this stage there may also be bulging or staphyloma of the ciliary region, showing that the growth threatens to perforate the sclera. An interesting point, with reference to the subsequent history, is that the prognosis is more grave when the tension is increased; *e. g.*, Lawford and Collins found metastatic processes more frequent in those cases presenting increased tension before enucleation, than in those in which the tension was normal.

In the third stage the tumor escapes from the eyeball and invades the surrounding tissue. The pain and distension that were present before, now disappear because of the relaxation of the tension. The mass grows with much greater rapidity. Unfortunately many of the cases do not come to the surgeon until this stage is reached, when the chances of an ultimately successful operation are greatly diminished. The optic nerve is invaded in at least one fifth of the cases, and the prognosis is thereby rendered more grave.

In the fourth stage metastasis occurs most frequently in the liver, though it may occur in the lungs, brain, stomach, uterus, or other organs. Fuchs found that 18.5 per cent of his cases suffered from metastasis. Hirschberg gives 38 per cent, and in 32.9 per cent Lawford and Collins traced death to this cause.

One of the greatest dangers to the patient is that of local recurrence, which is diminished if the eye is removed before the tumor has reached a sufficient size to cause increased tension and local irritation. As mentioned above, the tables of Lawford and Collins show that more cases are fatal when the enucleation is performed after the tension is increased than if it is done when the tension is normal. Once the growth has burst through the eyeball, the dangers are greatly increased.

Fuchs records local recurrence in 31 out of 235 cases or 13 per cent. Freudenthal found 25 per cent of local recurrences, 6 out of 24 cases, while Lawford and Collins note 8.86 per cent—7 out of 179 cases. The danger of local recurrence is greatest within the first year.

Prognosis.—Lawford and Collins in a report of 103 cases subjected to operation, were able to trace 79—of this number 39 or 49.36 per cent were alive at the time of the report. In twenty of these, an interval of three or more years has elapsed since the removal of the primary growth, and these are considered to be probable cures. This gives a percentage of recoveries of 25.31. The averages given by other writers vary from 6 per cent by Fuchs to 38 per cent by Freudenthal.

Metastasis has been known to occur eighteen and even twenty-five years after the removal of the primary growth—but whether the tardy occurrence of such processes should be regarded as metastatic is certainly a debatable question. However, the possibility of such an event, even after the lapse of many years, should make the physician extremely cautious in his prognosis, even though the patient is apparently cured. The therapeutics of this question has naturally been considered in discussing the symptomatology and prognosis; it can be summed up in a few words—excise the eye as soon as possible after the diagnosis has been made.

Glioma is the only form of tumor affecting the retina. It takes its origin from either the inner or outer granular layer, and in its growth may involve all the structures of the eyeball except the cornea and the lens. Histologically it is closely allied to round celled sarcoma, being composed of small cells, sometimes with short processes having a large nucleus and a small amount of protoplasm. It is difficult to demonstrate this protoplasm except on freshly prepared specimens. The intercellular substance is slightly fibrillar, but mostly composed of a semi fluid material which gives the whole mass a consistency like soft brain tissue. The neoplasm is bountifully supplied with blood vessels. In its growth it attacks the choroid, causing a proliferation of the cells of that structure, and separating it from the sclerotic by spreading in the loose connective tissue between these two coats of the eye. In this way it may pass beneath the ciliary body and appear in the anterior chamber.

The tumor grows from the retina in clusters, well illustrated in the specimens, which give it a nodulated appearance often distinctly seen with the ophthalmoscope. Foci of the growth may develop in the vitreous and choroid and spread as independent tumors. After filling the eye the sclerotic is attacked, its fibrous tissue infiltrated and softened, until the tumor escapes from the eyeball and invades the orbit. Or, even before the mass has attained a great size inside the eye, it may find a way of escape through the point of entrance of the optic nerve, along which it then extends. Having escaped from the eyeball, the neoplasm takes on a more rapid growth in the soft parts of the orbit, and soon it presses the lids apart and presents itself as a hideous fungous mass which bleeds easily. Death may be caused by extension backward to the brain, or the exhaustion consequent upon the involvement of other parts, either by continuity or metastasis.

Symptomatology.—Clinically, this disease, like sarcoma, may be divided into four stages. In the first stage there is no increase of tension and no irritation The parents of the child may discover that it can not see with the affected eye, and that there is a whitish reflex from the pupil This condition was named by Beers (one of the earlier ophthalmologists), "amaurotic cat's eye"

An examination of the interior of the eye with the ophthalmoscope reveals the growth with its nodulated surface, and possibly with the retinal vessels passing over it Numerous smaller vessels in the tumor may be seen As a rule, the vitreous remains clear

In the second stage, symptoms of irritation and inflammation appear The eye becomes painful, the tension is increased, the episcleral vessels are injected, the pupil is dilated, the lens and iris are pushed forward and the details of the interior are no longer distinctly seen The cornea becomes cloudy and may ulcerate In the third stage, there is perforation of the eyeball and invasion of the orbital tissues The fourth stage ends the case with either extension along the nerve to the brain, or metastatic processes in the lymphatic glands or other organs, chiefly the liver

This disease is one of early childhood, occurring very rarely after the age of 10 and with greatest frequency during the first three years of life Well authenticated cases are recorded by Knapp, Hirschberg, Vetsch, Lawford and Collins, in which the disease was congenital Furthermore, it happens in about one fifth of the cases that both eyes are affected at the same time, this symmetrical occurrence not being the result of extension of the growth from one eye to the other along the optic nerve, but an independent affair The prognosis is absolutely fatal unless the eye is promptly removed

If excision is performed during the first stage, and before the growth has invaded the optic nerve, there is some chance of recovery The chances of cure are very slim, however, when the operation is performed in the second stage, when irritation and inflammation have already begun, and when done after the tumor has extended to the orbit, there is almost no hope, although a few cases of so-called recovery are reported, even after complete exenteration of the orbit was necessary to remove the growth

One should not hesitate to enucleate both eyes if the growth is bilateral, for cases of recovery after double excision for glioma have been reported Even where there is absolutely no hope, it may be the surgeon's duty to remove the eye, and even the contents of the orbit, to relieve the little patient of his suffering

103 State Street

PRE-COLUMBIAN LEPROSY

BY ALBERT S ASHMEAD, M D
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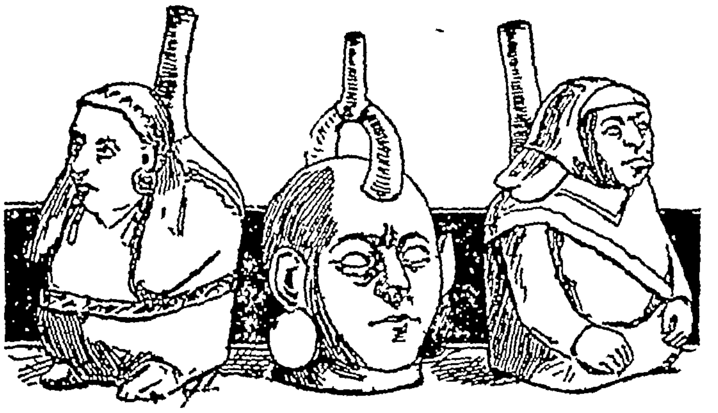
NEW YORK

Dr Muniz, of Lima, Peru, alone of all the authorities known to me, thinks that leprosy did exist among the Incas, he finds evidences of this in some ceramics, the *huacos*

In the *American Anthropologist* for January, there is an article entitled "The Huacos of Chira Valley, Peru," by Samuel Mathewson Scott This valley was once teeming with population, though scarcely populated now In this part of the country, there are numerous ruins and graves, and Mr Scott's excavations among these monuments of the past, enabled him to make a collection of Peruvian antiquities, now in the Museum of the University of Pennsylvania at Philadelphia All the pottery found in those burial grounds are called *huacos* They are found by the side of the mummies 'About the heads of the mummies, whether male or female, were ranged the pieces of pottery in black and red clay which are known as *huacos* These were probably filled with water or *chicha*—a beer made from corn, the beverage of ancient Peru Upon these jars the artists expended all their skill The clay itself is very finely worked, the designs are infinite in variety and imitate every form of animal and vegetable life There are jars in the shape of bananas, gourds and melons, there are jars ornamented with human figures, climbing monkeys, pelicans, parrots, fish and serpents These is, moreover, a distinct tendency toward the comic and grotesque—many animals have exaggerated teeth, and birds have quaintly elongated bills"

It is on these vases that Dr Muniz claims to have found figures which can reasonably, if they must not absolutely be explained, by the intention of the artists to represent leprous effects

Dr Brinton, of Philadelphia, kindly invited me to examine the Peruvian antiquities in the Museum of the University of Pennsylvania Under these antiquities can only be understood 1, hands and feet of mummies, 2, the *huacos* For skulls are out of the question "A leprous cranium," writes Hansen, "shows nothing peculiar, as the skull is never affected by leprosy" For the purpose of comparison with mummies' hands and feet, Hansen sent me photographs (He writes "You can see the ossa metacarpi, especially the first and the fourth, atrophied, and also the distal phalanges, the curvatures of the fingers are to be seen too,") of a leper's right hand in two attitudes, from Dr Kaurin's collection of leprous preparations at Reknas leper hospital, Molde, Norway It belonged to an anesthetic leper



Huacos pottery of the Incas without deformation

There is a large collection of *huacos* pottery in the Museum of Archæology of the University of Pennsylvania I examined it with Mr Stewart Culin, the director In none of the specimens was there any representation of face, hand or foot which could in any way be supposed to be indicative of leprosy I also examined with Mr Culin, mound-builders pottery[1] from the stone graves of mound-builders in Missouri According to Mr Culin's opinion, these specimens are unquestionably anterior to the Conquest In them the following evolution is shown First, there appears the simple form in clay of a gourd[2] Next, the gourd changes to the representation of the pregnant form of a woman, with the face of the woman on top Thus the vase, which had begun with the original gourd, had become in course of evolution, a human form Gradually this torso assumed hands, feet, backbone and buttocks A similar evolution in ceramics, from the gourd to human forms, occurs in East Asia I think I may make here an observation which will be superfluous for most readers, but which perhaps, will strike some as interesting The gourd is the original vase of these nations Naturally, when the artistic genius arose in their descendants, vases were made from clay, in the form of gourds The idea of vegetable life, existing in the gourd, extended to the vase and developed finally into conceptions of animal life, thus was suggested the pregnant woman with the swelling belly, in a sitting posture When the human representation had appeared it did not long remain limited to this feminine image, the male also was delineated The development of the human being originating in the woman's womb, was shown in pottery through all its gradations development of the face, then face and shoulders, then vases with face, shoulders and hands, feet succeeded, then all these parts with backbone added, developing through the clay, finally came the buttocks In this way, the vase was endowed with life and became a household idol The vase living, in the fancy of the people, was supposed to have its eyes on the affairs of the household, if they had made up their minds to commit a sin they took care to turn the face of the earthern god to the wall The mound builders, in order to leave nothing to chance, made their household gods with blind eyes, this at least is what the examination of these remains leads us to suppose There are other vases in which the *penates*, as we may call them, have sealed lips, to prevent indiscretions These blind eyes or sealed lips are the only deviations from the usual and healthy course of nature that I, at least, could discover in these monuments of prehistoric times

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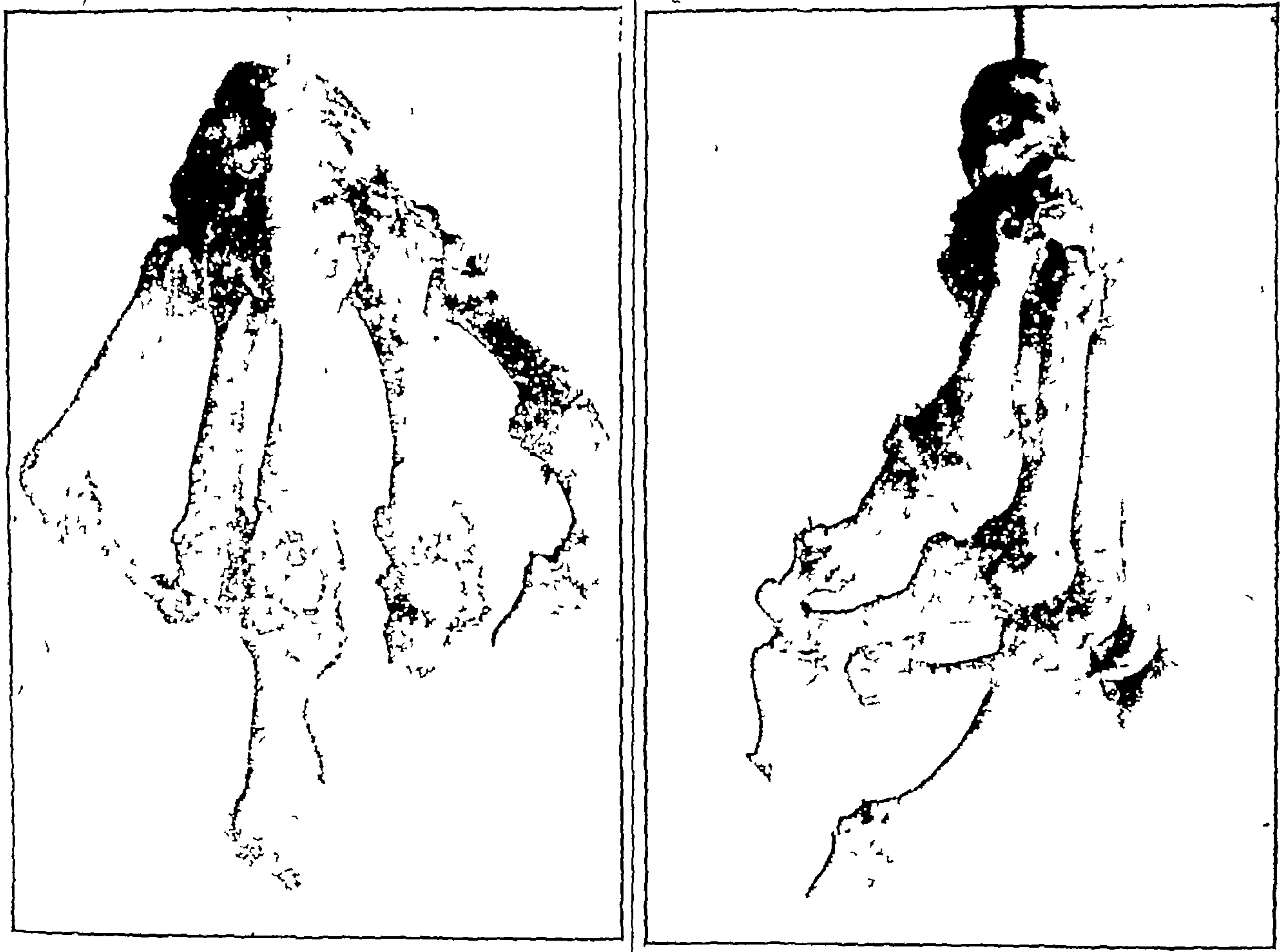
[1] The mound builders were the immediate ancestors of American Indians

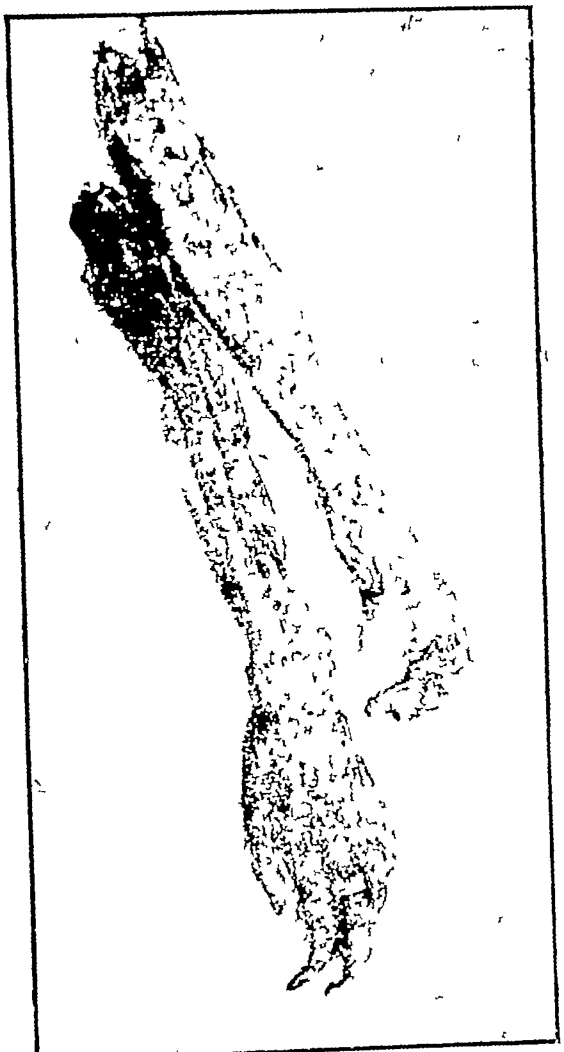
[2] Gourds and shells were mound builders models



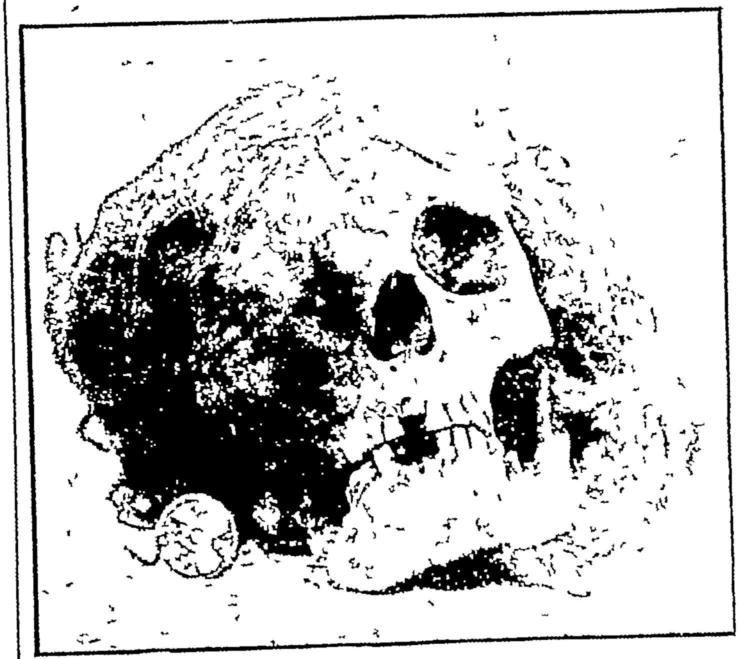
Lepra Anesthetica The right hand in two attitudes From Dr Kaurin s collection of leprous preparations at Reknas Leper Hospital Molde Norway *Sent to Dr Ashmead by Dr Armauer Hansen* for comparison with bones of Peruvian mummies

The same evolution from the gourd to perfect human forms is found, as I said before, in East Asia There leprosy is acknowledged to have existed for many centuries Yet in the East Asiatic ceramics not the least trace of any intention to represent deformations can be found It is true that I have seen some deformations in the American Museum of Natural History, New York, but they certainly, whatever they are, are not leprosy, they may be due to syphilis, a disease which we know to have existed in Peru, syphilis and leprosy both would destroy the structures of the nose, and destroying the nose, would spare the upper lip Now the deformations represented by these works of art show this in three instances the cartilaginous part of the nose and the upper lip removed as by a knife, showing the septum and nasal bones and the soft tissues covering those remaining, and also the teeth, one figure lying prone upon the belly, with both feet gone to above the ankles The nose and upper lip partly cut off, but both hands are perfect Another figure shows a partial loss of the upper lip a semi-circular piece being cut out on the left side, teeth showing where the lip should have concealed them This head is drawn far back—opisthotonus Another one has the nose cut off, with the septum showing, and chin considerably drawn forward, a perfect mouth being at the top of it Another figure shows a chin drawn strongly over to the right side with loss of upper lip In all these figures the hands are perfect

I regret not to be able to give photographs, but the explorer, Mr Bandelier, the owner of these specimens, who is at this moment excavating in Peru, exacted before his departure, the promise that these articles should not be represented before he had finished his research I asked the director, Mr Saville, whether he thought, from his own investigations in Yucatan, Mexico and Peru that these peoples would make representations of loathsome diseases on their pottery He says that he has seen the coitus[3] represented in that pottery, and also some orgies, and that this disposed him to think that other matters might be represented which, in our own ideas, do not belong to art He called my attention to a publication in the *Scientific American* in 1884, from Dr Le Plongeon's discoveries in the ruined cities of Yucatan "The figure (stone) was found on its back, one leg was broken off below the knee, but was found under the figure and afterward adjusted The head of the statue rested on a stone painted red, that represented the tongue of a serpent, the peculiar shape of which Dr Le Plongeon long ago discovered to be the letter *chi* or *ch* of the Maya alphabet


Hands and forearm of Peruvian mummy, presumably pre Columbian Museum of Archæology, University of Pennsylvania

When the figure was placed upright we hardly knew what to call it, it appears so human, yet so apish In the position it occupies it is 97 centimeters (about three feet) high So if standing it would not represent a very tall person It is made of white limestone and painted dark brown The head is flat at the top and back, and apparently hairless, but painted blue, and over that are red streaks from the forehead down to the shoulders The eyes are open, and painted blue around the lids The nose is not pierced, but the clumsily made ears have each a large hole The mouth is closed and lips painted red On the back part of the top of the head a hole is pierced, so that a string can be passed through, perhaps to secure a bunch of plumes, perhaps to keep a banner in place, for in the palm of the right hand there is a groove as if for a round stick to fit in there The hands are not altogether human, where the fingers begin there seem to be mittens, the other ends of which are nowhere visible The fingers, like the toes, were furnished with nails made of shell, and fitted in place with mortar so as to look very natural even in color Unhappily nearly all were fallen, but we found some of them A necklace is indicated by a line of red paint around the throat Garters, below the knee, are painted blue and red The loins are covered with an ornamental *uut*, a scanty garment yet in use among the aborigines, and anciently worn by Egyptian laborers The right foot is turned in, as if the individual had been club-footed The sandals are painted blue, and close up around the heel, bu the very elaborate and fanciful fastenings are red On one heel is the name, *Cay Canchi*, written with red paint "This image," says Dr Le Plongeon, "may possibly represent the sacred monkey of the Mayas as the *Cynocephalus* was emblematic of the god *Thoth* among the Egyptians '


Head of Peruvian mummy, presumably pre Columbian Museum of Archæology, University of Pennsylvania

A monkey, even a deformed one, was thought worthy to be represented in stone Mr Saville suggested that it might be, not a monkey, but a leper, as th arms were cramped and the hands were in a clawed position, similar in some degree to that of a leper' hands (not mutilated)

Dr Emil Holub, an African explorer who was present at the Museum, told Mr Saville that he has see lips cut, as in these *huacos*, and something ornamental placed in the openings, in African Bushmen

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[3] I have seen a silver image from Peru, of a monkey copulating with a llama.

I may say that it would hardly be natural that art should represent loathsome features of nature, which could not be looked at without pain and perhaps horrible recollections It was the idea of a correct human development that was in the mind of the potter, and what had the horrors of an awful disease to do with that?

It is clear that the non-existence of any leprous characteristics in American antiquities is not a proof that the disease did not exist in this country anterior to the Conquest The thing is simply this—*non liquet*

Through the courtesy of Dr Brinton and Mr Culin, I have been permitted to examine closely the following Peruvian remains in the collections at the Museum of Archæology University of Pennsylvania

1 The Scott collection, from Chiras Valley, Peru, to which reference has been made in the article published in the *American Anthropologist* for January hands and feet of several mummies, post-Columbian, as shown by the presence of glass beads

2 Dr Carl Lumholtz' collection, from Chihuahua, Mexico cave mummies' hands and feet, presumably ante Columbian remains from burial caves (a very ancient form of disposing of the dead), North American Indian remains, presumably prehistoric, certainly several hundred years old, cave mummies' hands and feet from Nararachic, Mexico, remains from San Mateo Peru, near Ancon, the most ancient burial place in Peru

3 A lacquered mummy head from Ancon, Peru, with gold band over the mouth, presumably of a priest or sacred person carried over the country for worship according to custom

4 A collection of loose bones of hands and feet from Cave Valley, Mexico (cave burial)

5 Apache bones, hands and feet, from Sonora, Mexico (Apaches are thought by some observers to have East Asiatic (Tartar) characteristics and customs)

6 Remains from a cave near Yoqinbo, Chihuahua, Mexico, not ante Columbian, on account of presence of glass beads

7 A collection of perforated human bones, mostly humeri, from the mounds of Ohio These perforations in the olecranon fossa were formerly supposed to be syphilitic, but they really are accounted for by the forcible extension of the arm, necessitated by the grinding of corn In none of these bones was there any evidence of leprosy

I examined besides, skulls from Choptauk ossuary, the sand bonepits of Dorchester County, Maryland, remains of Nanticoke Indians, nineteen casts of the Muniz collection of Peruvian skulls, showing ancient trephining, recently exhibited in the Smithsonian Institution, Washington, and skulls of Indians, excavated in Florida These last are the only ones in which there can be perceived any evidence of disease, probably syphilitic osteitis, through intercourse with Spaniards

There is a diseased skull in the American Museum of Natural History, New York, from an ancient grave at Lachay, near Chancaz, Peru It belongs to the famous Bandelier collection On the left side of the frontal bone, near the median line, there is an egg-shaped, deep cavity, which does not penetrate the internal table of bone This cavity has the appearance of having contained a hard smooth substance, probably a bone cyst, and the bone seems to have grown partly over the foreign body Upon the parietal and occipital bones and especially on the frontal bone between the cavity and the orbit, are evidences of such destruction as might result from syphilitic osteitis These evidences of disease, excepting the cavity in the frontal bone which, I may say in passing, has nothing to do with leprosy, are similar to those found in the Florida Indians The latter evidently had contracted syphilis through their connection with the Spaniards of Mexico

Mr Culin informs me that there is one distinctly connecting link between the Mexican Aztecs and the Asiatics, besides that evolution of pottery which I have described above It is the game of *patoli* This game is played in Mexico thus there is one stave held with the hand, across three parallel staves, it is used as a bat to throw beans or balls up to be caught, when falling back, upon a cloth, a tally is kept, according to the position in which these balls fall on the cloth The three parallel staves are marked with an arrow, the single stave which crosses the parallel ones has the mark of a bow on it The game was originally played not with staves, but with arrows, the warrior always holding three arrows with his bow This explains the mark of the arrow on the staves That the same game, absolutely the same, should exist in Asia can not be due to chance

It seems to me that the intercourse, whatever it may have been, to whatever degree it may have existed, between America and Asia is the only thing which could, after what I have said before, make it admissible that leprosy existed here before Columbus came Certainly syphilis existed here, and, if it did, it could not have come from anywhere else but Asia Therefore, in spite of the absence of every proof of the presence of leprosy here, before the Conquest, we must consider the question as still in doubt

The oldest center of leprosy in America, is Old Colombia, (Granada, Venezuela and Ecuador) Carthagena of the Indies was a most ancient focus of leprosy Mr Luther F McKinney, U S Minister to Bogota, says "This country is cursed with leprosy, there being about 24,000 lepers in Colombia alone Unless something is done to isolate those who are afflicted, and means taken to prevent the marriage of lepers, the whole country will eventually become a race of lepers "

The librarians of the National and the University Libraries of Ecuador, can find nothing for me, in any way connected with the origin and history of leprosy in Spanish America These libraries are lamentably small and imperfect

I am informed by the British Minister in the same country that all matters relating to leprosy have been extensively treated in Colombia where as I mentioned above, the disease is very widely spread In Ecuador, he says the number of cases is comparatively small

Dr Zeballos, the Argentine Minister in Washington, writes that although he is a student of South American history he does not remember having read that leprosy existed among the Indians of his country previous to the advent of the Spaniards

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NOTE —Brinton says But an obscurity certainly hangs over the ethnography of Florida at the period of the discovery A large part of the peninsula was peopled by a tribe whose language stood alone on the continent the Timucuas, and which became extinct generations ago They are described by the Spanish and French explorers of the sixteenth century as quite a cultured people and at that time as building mounds and erecting their houses upon them "

Dr Juliano Moreira, physician to the Hospital Santa Isabel, Bahia, Brazil, says that the natives there before the Portuguese colonization, the Tupis, the Krars (Keras), the Goytacazes, the Guerens, the Gucks, the Parecos, the Guaycurus, the Lengoas and the Aruwacks, were certainly not leprous and it is incontestable, in his opinion, that among the Indians now living, there is no disease that can be construed into leprosy

Dr Bibb, of Saltillo, Mexico, says that among the most prominent and best informed men in the city of Mexico, the general opinion is that the disease was introduced there by Chinese

Dr J B Terres, Vice Consul-General to Hayti, thinks that nothing has been written by any native of that island, nor by any foreigner, either as to the origin and history of leprosy there However, it is supposed by old physicians, with whom the Vice-Consul spoke on the subject, that it was introduced by the Spaniards, but there is no proof of that The same gentleman states that leprosy is very rampant in that island, and that no precaution whatever is taken to isolate the cases There is no leper hospital, and the lepers are allowed to circulate without let or hindrance

Dr Beaven Rake (Report on Leprosy, Trinidad Leper Asylum, 1890) quotes from Leloir, page 300, that Drs Magalhoes and Mayrinch state that before the discovery of Brazil there was no leprosy among the Indians, nor subsequently in those who did not mix with the foreigners

Beaven Rake says that of 216 lepers treated in the asylum, 74 or rather more than one-third were coolies Of 138 reported from outside, only 29 were Hindus No doubt there are more, for coolies when free do not seek medical advice so readily as other patients, unless they are paupers and wish to be maintained in the colonial hospital or leper asylum "On the whole, then," says Rake, "the proportion of coolie lepers may be fairly taken as one-third The question is, Where do they get the disease? We are told that there are some 250,000 lepers in India, and it is therefore hardly fair to suppose that all the Hindus who develop leprosy in Trinidad become infected here It is far more likely that in some or many of them, the disease is already incubating when they land here, though it may not be evident enough to insure rejection after medical examination"

I have received a letter from Mr McKinney, U S Minister to Colombia from which I extract the following

"This country was first discovered (I mean Colombia) by a Spaniard, Gonzales Jiminez de Quesada, who started from the coast with a large body of men to explore the interior He discovered the beautiful plain in which Bogota is situated, and founded the city of Bogota August 6, 1538 Some time after this, I do not know how many years, he was attacked *with leprosy and died of it, I think about* 1578 This was the first case known in Colombia, and attacked the first Spaniard who entered the country In a late conversation with the acting Minister of Foreign Affairs, an intelligent gentleman, he said 'Leprosy was not brought here by the Spaniards, but was developed here by the mixture of the races' I can not see, however, that this can be true when the first Spaniard who landed in this country, contracted the disease and died of it It seems very plain to me that this man had the disease in his blood, and it developed itself here It is a well-known fact that leprosy had long before this existed in Spain, though at that time it is said to have been extinct But while the disease is hereditary, it sometimes skips a generation, and this man may not have known his blood was tainted with the disease This is the first history of leprosy in Colombia "About 1550 a priest was sent by this same man to Africa, and he brought negroes to Panama and that was the first introduction of the black race into Colombia (See note)

"But from all the facts I have been able to gather, the leprosy can not be attributed to the negroes There is very little pure blood of any race in Colombia, the people are a mixture of the Spaniard, Indian and negro races Whether this mixture of the races, as some here assert, has caused the rapid spread of the disease, I am not competent to judge There are in Colombia now, from 25,000 to 30,000 lepers, some put it at 60,000, but the weight of authority is in favor of the former numbers The doctors here in Bogota declare universally, as far as I have talked with them, that leprosy is not contagious except by inoculation and heredity But there are differences of opinion about this, and you are better able from your study of the subject to answer that question Considering the large number of lepers in Colombia, the trade carried on with the United States, and the large *number of Americans who* are constantly coming here and returning to the United States, this is a matter of great importance to us, as it is likely in time to be carried to our country, especially as there is every year more or less marriage between the people of the two countries

'I think one cause of the fearful spread of the disease is the poverty and filth of the people Bathing is considered here more deadly than leprosy among the common people, and any filthy disease would find a congenial home among them Another cause may be that the people are cursed *with syphilis which was first brought among this people by* the soldiers from Venezuela, during the early wars of independence However, some say that those who have the one disease, are not so apt to take the other[4] The government has so little money to expend for the purpose, that there is little done to isolate the disease, and though there are many schemes, and some hospitals for these unfortunates, they are scattered over every part of the country, and because of the laxity of sanitary regulations, they become beggars and vagabonds everywhere I see them every day on the streets of this city Unless something is done soon, the nation will become a nation of lepers and a menace to every civilized country

"In my opinion the day will come when leprosy will command the attention of the medical profession of America, far more than it ever has in the past May the day be far distant when our fair land will be cursed by such a loathsome disease"

(To be continued)

THE ANTAGONISM BETWEEN CITRIC ACID AND CANCROID CELLS

BY C M FENN, M D

SAN DIEGO, CAL

Though on the eve of another convocation, I venture to supplement the interesting discussion of malignant growths, held at the forty-fifth meeting of the Association, by calling attention to some original experiments inaugurated by the writer several years ago The conclusions, with some additional cases, are now presented as a possible solution of the difficulties which so often militate against the radical extirpation of these and other neoplasms

None will dissent from the dictum of the Section that early interference is to be commended, but unfortunately the scalpel, so far as the patient is concerned, is a *dernier ressort*, and not until he has exhausted other methods does he appeal to the surgeon

It need not be remarked that from their inception, cancroid and other succulent tumors are environed by juices and cells, proliferations from the embryonic (?) germ which seem to await only the irritation of caustic or knife to migrate and set up foci of

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[4] That is the popular belief in Japan too

Note —The first negro in Peru was with "the thirteen" of the Isle de Gallo, before the Conquest, and in 1536 (two years before Quesada's time) Maroon negroes were in that country The privilege was granted to Pizarro by the King, to import negroes from Africa before Quesada's time infection elsewhere May not these epithelial pearls, like the foliage of the agave, also contribute to the ultimate fruition of the central nucleus?

Fig 141, page 528, of Virchow's "Cellular Pathology," while illustrating a solid mass of cancroid from a tumor of the lower lips, graphically displays these cells *in situ* The distinguished author in the same connection says, concerning the differential diagnosis of these neoplasms "If you attempt to distinguish cancroid growths from real cancer by the epithelial structure of their elements, you will herein give yourselves trouble in vain"

Hence, questioning the perspicacity of even the microscope, I am in the habit of classifying all facial tumors of the aged as at least suspicious and demanding immediate extirpation

With the primary purpose of more accurately defining the boundaries of such growths, I employed a saturated solution of citric acid hypodermatically It was found that the liquid introduced at any point near the periphery seemed to possess an elective affinity for the diseased structures and that it blanched and brought the same into bold relief This will be recognized as a desideratum in operations about the face where the perplexing alternative usually presented is a sacrifice of symmetry or the probability of an early recurrence Continuing the injections for several days, sometimes at the behest of the patient, it was further discovered that the area of induration and infiltration was measurably reduced In some instances, as will be noted, no other surgical interference was required, and let me add that while the acid treatment enables the surgeon to make his incisions with greater precision and minimizes the danger of metastasis, it seems to be quite innocuous to normal tissues The patient's experience is one of instant relief from the smarting and tension which attend certain neoplasms

Among the cases previously reported was that of a man nearly 60 years of age, three of whose ancestors had succumbed to tumors of the face, In his own person a sessile growth as large as a filbert, having its apparent origin under the inner canthus of the left eye and leaving in its descent a broad cicatrix, was finally arrested at the junction of the ala of the nose with the cheek In its new situation, enlargement became rapid and painful Extirpation of the entire mass as outlined by the preliminary injection would have involved half of the nasal ala and not a little cheek, besides inviting profuse hemorrhages Repeated instillation of the acid solution, during three or four weeks, reduced the dimensions to that of a small pea The resultant scar was insignificant, nor had there been any evidence of recurrence up to the period of his accidental death six years later

Another of the earlier cases was a so called rose cancer which extended from one eyebrow to the other, and vertically more than an inch Adequate incisions would have encroached upon both eyebrows, leaving an unsightly cicatrix at best After a number of acid treatments the entire growth was included in an ellipse of no greater horizontal diameter than eight or nine lines

Of more recent cases, I now note an undoubted epithelioma of the lower lip which involved a portion of the chin in its dart-shaped induration Similar procedures relieved the chin and enabled me to include the remainder of the tumor in a small V-shaped incision Total extirpation in the beginning would have necessitated a formidable operation with plastic accessories The gentleman's impatience alone prevented the attempt at radical cure with injections

A further opportunity for testing the acid treatment occurred in the person of a lady over 60 years of age from whom I removed a scirrhus, left breast Her financial condition precluded a lengthy sojourn in the city, and at the same time rendered any preliminary treatment impossible Compensation for this was attempted by generously retrenching the flaps and bathing the parts subsequently with a strong acid solution Union was delayed because of insufficient approximation, and some indurated portions of the integuments

Yet a few injections *in situ* removed the latter, promoted healing and seemed to soften up one of the axillary glands which had escaped detection during the operation A necessarily broad but healthy cicatrix was obtained in a few weeks, nor was there any recurrence at the wound site Fifteen months later, the lady died of peritoneal dropsy which was regarded as metastatic and malignant

More recently it was my privilege to treat a nose of generous proportions from which a Kentucky surgeon had excised a neoplasm some years before After a brief respite it broke out again and again, and for the last two years had resisted all the blandishments of the *ars medicatrix* Among other remedies, and notwithstanding his dual rôle of deacon and paterfamilias, some unbelieving Æsculapius had unsuccessfully subjected the gentleman to specific treatment During the last few months of domestic or no treatment, its history was that of an open sore, either hemorrhagic in tendency and habit, or emitting sanious discharge which seldom rose to the dignity of a scab Removal of the bit of paper which covered it revealed a raw, red and glazed surface, about five or six lines in diameter, surmounting an indurated base of much greater dimensions, in fact a typical epitheliomatous ulcer Complete excision of the growth would have impaired the symmetry of the organ, by depriving it of the entire right ala Hemorrhage and all unpleasant sensations ceased after the first injection, while cicatrization and atrophy proceeded *pari passu* until he was discharged cured

In one instance, injections were thrown into the substance of a large colloid carcinoma, resulting in the disintegration of portions of it It was too late, however, to prevent systemic infection or to arrest the growth

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ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER 1854–1894

BY JOSEPH JONES, M D , LL.D

NEW ORLEANS LA

(Continued from page 595)

Chapter IX

ALTERATIONS OF THE BLOOD IN YELLOW FEVER, INDUCED BY THE SUPPRESSION OF THE FUNCTION OF THE KIDNEYS AND LIVER, AND THE RETENTION IN THE BLOOD OF THE CONSTITUENTS OF THE URINE AND BILE

The constitution of the blood is more or less altered in every case of yellow fever, but the changes are observed in greatest intensity in those cases in which there is partial or complete suppression of the action of the kidneys

By careful experiments I have determined that during the active stage of febrile excitement in yellow fever, not less than 600 grains of urea are excreted by an adult during twenty-four hours As the action of the kidneys is in many cases wholly arrested for various periods, ranging from one to four days before death, the whole amount of urea accumulating in the blood and remaining in the system may range from 600 to 2,400 grains The gastro-intestinal mucous membrane, in such cases, eliminates the urea, both as urea and as carbonate of ammonia , and both these substances frequently enter into the constitution of black vomit, which in many cases is intensely alkalin from the presence of carbonate of ammonia, in sufficient quantities not only to neutralize the acid of the gastric juice, but also to give forth such strong fumes as to be visible as a dense white cloud, when a rod dipped in hydrochloric acid is held over the black vomit, freshly discharged from the stomach or removed from the viscus immediately after death

The presence of ammonia in the fluids of the stomach in such cases is clearly not due to subsequent changes, but is referable to the decomposition of the urea in the stomach, after the manner which has been pointed out by Frerichs, Bernard and other observers In such cases the blood in the cavities of the heart and in the large vessels is black, and does not form a clot, and the solvent properties of the ammonia are manifest not only in the dissolution of the fibrin, but also in the altered appearance of the colored blood corpuscles, and in the rapidity with which they disappear when the blood is allowed to stand

One of the most striking facts which arrests the attention of the observer in post mortem examinations in this disease, is the apparent abundance of the blood in the various textures, its fluidity, and also the bright arterial hue which it rapidly assumes upon exposure to the atmosphere This condition is referable to the distension of the blood vessel system, in consequence of the failure of the kidneys to eliminate the watery elements, as well as to the action upon the blood of the excrementitious materials While it is true that urea is present in healthy blood in small amount, as may be determined not only directly by chemic means, but also by a simple calculation, as has been done by Dr Goodfellow ("Lectures on the Diseases of the Kidney, generally known as Bright's Disease and Dropsy," London, 1861, pp 67–69), I have at the same time, by careful analysis, shown that the urea is greatly increased in the blood of yellow fever, amounting in some cases to near 2 per cent of the whole mass of blood

The following is the calculation of Dr Goodfellow, with reference to the amount of urea which must necessarily be present in healthy blood

No physiologist denies that the urea is merely separated from the blood It is universally acknowledged that the kidneys have no converting power It can not be supposed, therefore, that all the urea contained in the blood goes directly to the kidneys, and consequently it follows, that only that quantity which passes through these organs is freed from this excrement at every successive revolution of the circulation The following calculation will show this clearly We will take the case of a healthy man, excreting every twenty-four hours about 360 grains of urea This quantity divided by 24 gives 15 grains every hour, and still further reduced, one fourth of a grain every minute We will suppose the quantity of blood in his body to be thirty pounds, and that it takes from a minute to a minute and a half, to complete the circulation We will suppose, moreover, that the kidneys constantly contain about three ounces of blood, and that about five ounces pass through these organs every minute As we get, then, a quarter of a grain of urea from the five ounces passing through the kidneys, in this space of time, it is reasonable to infer that there will be left in the remaining mass of blood (475 ounces), 23¾ grains of urea

The quantities which Dr Goodfellow has conjecturally assumed are, in the one case too small, and in the other too large, and he has subsequently added the following correction of the preceding calculation

In one of the elaborate tables, in Dr Parkes' work on the urine, it appears that the mean amount of urea secreted by males in twenty-four hours, as furnished by 250 analyses, made by twenty four eminent chemists, is 512 4 grains, varying from 286 1 grains, the lowest, to 688 4 grains, the highest, and in females, from 260 to 400 The amount of blood (thirty pounds) is more than the area of the heart and blood vessels in a man of average size can accommodate, notwithstanding that it is the quantity as calculated by eminent physiologists The amount of blood expelled from the left ventricle at each contraction, as supposed by Valentin (five ounces), and Volkmann (six ounces), is probably too large The calculation is made on the supposition that at each contraction of the left ventricle from two and one-half to three ounces of blood are expelled, and that of the mass of blood so thrown into the aorta, from half a drachm to a drachm is propelled by the kidney, and that the same quantity makes its exit simultaneously by the vein Supposing, then, that there are from seventy to seventy-five ventricular contractions in a minute, the total quantity passing through the kidney during this space of time, will therefore amount to from five to eight ounces The calculation does not require the demonstration of the exact quantity which is always in the blood, but that there necessarily must be some urea constantly in it, and more than is generally supposed The excretion of urea is always going on more or less quickly, and also the formation of this substance from the waste of the protein tissues, and from the same principles in the food, in greater or less quantity according to the state of the body, as to exercise or food , and as its transmission into the blood through its principal conduit, the thoracic duct (M Wurst, as quoted by Bernard), is also constant, it follows that there must be more or less of urea in the blood at all times

With respect also to the length of time required to complete the circulation, some facts of importance have been omitted in the calculation Now that we have more correct notions with respect to secretion, most physiologists will show that although a complete revolution of the circulation may be effected in from a minute to a minute and a half, as deduced by calculation (Valentin and Volkmann), and by experiments (Poiseuille, Bernard and Blake), the blood really moves with varying velocity in different secreting and excreting organs, influenced as the circulation is probably by the peculiar affinities, and the diameter and arrangements of the capillaries and other minute vessels We observe that every secreting organ has some peculiarity in the arrangement and size of the vessels, and in the thickness of their walls This arrangement must affect to some extent the velocity of the circulation, and affect also the character of the blood plasma transuded into the tissue, from which the secreting agents are to separate the peculiar constituents of the secretion Taking the double circulation of the blood in the kidneys into consideration, then, it is probable that the blood does not pass through them so quickly as through some other organs, and that the whole mass of blood does not pass through the heart every minute or minute and a half, although a quantity equal to it may do so, some portions may, in fact, pass twice or oftener through the heart in this space of time

On the assumption that there are twenty pounds of blood in a man's body, and that one ounce and a half of urea is excreted in twenty-four hours, Marchand calculated that the blood contained the 15 360 part of its weight of urea *

The results of these investigations on the condition of the blood, and upon the chemic constitution of black vomit in yellow fever, sustain the view held by MM Prevost and Dumas, Claude Bernard, Ricord, and other physiologists, that urea after having been generated in the blood and tissues, is simply excreted by the kidneys, and does not confirm the doctrine taught by M Herman, Dr Beale and others, that urea and uric acid are not only eliminated but are formed by the renal tissue And careful physiologic experiments which I have performed have been confirmed by the results of the inquiries of M Grehaut (*Archives de Physiologie Normale et Pathologique*, Sep et Novembre, 1870—*American Journal of Medical Sciences*, October, 1871, p 530), which extended over several years According to this careful observer, immediately after nephrotomy in the fasting dog, urea begins to accumulate in the blood, its increase being manifest within three hours after the operation, the increase of weight of the urea in the blood and in the lymph, twenty four hours after the ablation of the kidneys, is equal to the weight of it that would have been excreted by the healthy fasting animal in the same space of time, the accumulation of urea in the blood in the hours that succeed nephrotomy, follows the same march as after ligature of the ureter After ligature of the ureter, the quantity of blood circulating through the kidney of the side diminishes, under normal conditions the blood of the renal vein always contains less urea than the corresponding artery, in an animal in which the ureters have been ligatured, the renal venous blood obtained twenty-four hours after the operation contains as much urea as the renal arterial blood, so that the tissue of the kidney neither excretes nor secretes any more

Finally, M Gréhaut has shown, that ligature of the ureter and nephrotomy are two operations that are identical in their results, they both suppress the eliminative function of the kidneys, while they form no obstacle to the formation of urea, which takes place outside of the kidneys

Whatever theory may be held as to the cause of the peculiar phenomena, denominated uremia, whether that of the poisoning of the blood by the urinary constituents generally, or by urea especially, or by the product of its decomposition, viz, carbonate of ammonia, or by the edema of the brain from the accumulation of the watery constituents of the blood, attended by serous apoplexy and irritation of the brain and its membranes, it is evident that in many cases of yellow fever, the fatal issue is determined chiefly by the retention in the blood of the constituents of the urine To this cause must be attributed to a great extent, the restlessness, nervous agitation, intoxication, delirium, convulsions and coma characterizing the stage of calm or depression in many cases of yellow fever

Note —Dr Carl R Braun, in his valuable work on the "Uremic Convulsions of Pregnancy, Parturition and Childbirth," has given the following summary of the state of our knowledge at the time of his work, which we here reproduce from the important bearing which it has upon similar phenomena in yellow fever

"Eclampsia parturientium is commonly the result of uremic intoxications arising from Bright's disease of the kidneys, and produced mostly by carbonate of ammonia in the blood, perhaps also by extractive matters in the urine

"This appears from the following analysis

"*a* All observers at present agree that urea retained in the blood is not, as such, the cause of the uremic symptoms

"*b* Lehman (Physiol Chemie, Vol ii, s 245) and Frerichs almost simultaneously and independently of one another arrived at the conviction that cause of the uremic phenomena is to be sought for in the ammoniacal contents of the blood, produced by the transformation of urea into carbonate of ammonia

"*c* The investigations of Frerichs, Litzmann, the author (Dr Carl R Braun), Heller Kletznsky, Ofpolzer, Gegenbauer and others have demonstrated that in the eclamptic, urea and carbonate of ammonia developed by its decomposition are generally found in considerable quantities in the fresh blood, that from the presence of these materials in the blood the occurrence of uremic eclampsia may be prognosticated, and that these substances are observed also in the blood of children born of uremic mothers

"*d* Chemic analysis, however, can not always, even during the most violent eclampsia discern the presence of carbonate of ammonia in fresh blood, as is shown in an observation made on August 4, 1854 by Gustav Braun and Heller and communicated to me The blood, drawn from a vein after the sixteenth eclamptic fit, separated itself into clear serum and a light red, bulky, moderately consistent clot covered with spongy fibrin, tinged yellow by a gall pigment The strongly alkalin serum had a specific gravity of 1025, and contained much casein and biliphæin The serum filtered after being treated with alcohol, contained little urea and sugar, much cholesterin and cholic acid The blood then had not the uremic, but the cholemic constitution, as it contained no carbonate of ammonia, but all the elements of the bile This observation although it does not stand alone, can not be used to invalidate the theory of the very frequent coincidence of eclampsia and uremia It rather points out that the excrementitial elements of bile may produce cholemia in the living body, and be likewise a cause of eclampsia

"*e* According to the very careful experiments of Mettenheimer (Mettenheimer C, Archiv f Voissenschrift liche Heilk i 4,) Beneke, and Reuling, (Reuling, W, Inaug Diss, Gussin, 1854,) all healthy and sick individuals have the power of expelling ammonia under certain circumstances In the lungs of the healthy, ammonia is in general absorbed rather than expelled, hence the vapors produced in holding before the mouth a glass rod wet with dilute muriatic acid, are never capable of indicating the degree of uremia and Bright's disease

"*f* Normal blood when fresh drawn does not contain ammonia, as Reuling has proved by a very simple but very delicate qualitative method with logwood paper In several diseases as caries of the teeth, angina tonsillaris, typhus, pyemia, ischemia, and blenorrhea of the urinary bladder, we sometimes find in the blood carbonate of ammonia, just as in uremia and Bright's disease Hence carbonate of ammonia in the blood can not be regarded as a characteristic indication of uremia, and in many constitutions uremia may be produced by extractive matters in the blood

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* Lectures on the Diseases of the Kidney, generally known as Bright s Disease and Dropsy, by S F Goodfellow, M D, Ch C, London 1861 pp 67-69

"*g* After weighing the objections raised against the theory of the intoxication of the blood by carbonate of ammonia, Litzmann has arrived at the following conclusions the fresh blood of healthy individuals never contains ammonia In the majority of the cases of uremia, the blood does contain ammonia, which has been formed by the decomposition of urea formed in the blood and retained in it, or by the decomposition of the urea that has been secreted in the urinary passages and has returned into the circulation by absorption The presence of ammonia in the blood is indicated by the increased ammoniacal contents of the expired air, but this increase can not of itself be considered a proof, for it may be produced by the admixture of ammonia formed in the cavity of the mouth by decomposition of the oral secretions and of remains of food in the case of carious teeth, etc In the vomited fluids and the contents of the intestine in cases of uremia, carbonate of ammonia is not unfrequently discovered Sometimes there is an alkalin reaction of the sweat (Litzmann, Ruhle) The urine may contain ammonia, even when it has an acid reaction (Bruke) But, on the other hand, presence of ammonia in the blood is not by any means a sign of uremia exclusively, for it has been exceptionally observed (Reuling) in other diseased conditions (typhus and pyemia) when the urinary secretion was not disturbed On the other hand, cases undoubtedly occur where notwithstanding obstructed secretion of urea by the kidneys, and the occurrence of all the characteristic symptoms of uremia, the blood does not contain any ammonia and the ammoniacal contents of the exhaled air are not increased (Reuling), but when, on the contrary, undecomposed urea is found in the transudations from the blood, and in the sweat especially, may be in such quantity as to be left on the skin in the form of white crystalline dust (Schottin, Archiv f Physiol Heilkunde, Vol x, xi, xii, Fiedler, De Secretion Urinæ per Cutum, Dissit Inaug, Med, Leipsic, 1854) The cause of uremic phenomena can not therefore be sought for in the decomposition only of the urea retained in the blood into carbonate of ammonia

"*h* Whether the accumulation of extractive matters in the blood, in consequence of suppression of the urinary secretion is the cause of eclampsia (Schottin, Reuling) or not, is a question for the future to decide Hoppe found, in a case of a uremic poison, besides urea, three times the usual quantity of extractive matters in the serum of the blood, and also the muscles saturated with their excretory products The quantity of kreatin obtained from them was five times as much as the normal amount

"*i* Wieger, on these grounds regards uremia not so loosely as the ancients, who held it to be a metastasis of the urine, and not so exclusively as Frerichs, who considers it an intoxication by carbonate of ammonia, but as a consequence of Brightian exudation into the kidneys which in its chemic relations is characterized by retention of water and excrementitial matters in the blood, which itself, from the loss of blood corpuscles and albumin is impoverished in these elements But it is uncertain whether the chief part in the combined operation is to be ascribed to the excess of serum or to the diminution of the albumin and blood corpuscles Hydremia, however, is never the cause of the nervous symptoms, but has only a predisposing action

"*j* From the results of chemic analyses it is certain that in uremia, carbonate of ammonia and urea are often found in the fresh blood and are rarely wanting Although the essential nature of uremia is always coming into clearer light in consequence of the rapid strides of organic chemistry, yet we know enough already to assure us that eclampsia parturientium is always caused by the presence in the blood of an excess of excrementitial matters and also generally by uremic intoxication"

To the action of the same cause also may certain changes of the blood be referred, as the dissolution of the fibrin and the rapid changes which the colored blood corpuscles undergo after death and after removal from the living body During the healthy action of the kidney, as has been shown by Simon, of Berlin, and Bernard, of Paris, fibrin disappears from the blood passing through this organ and is most probably converted into albumin, and the increase of the fibrin in Bright's disease has been referred to the cessation of this change of the fibrin in the diseased kidney, but in yellow fever, notwithstanding that the function of the kidneys may be wholly arrested, there is almost complete disappearance of the fibrin of the blood, so profound is the action of the defibrinating cause That very important changes take place in the blood during the healthy action of the kidneys, from the separation of the urea and other constituents of the urine, is evident from the fact observed by Bernard, that when the kidney is active, the blood issuing from the renal vein has a bright sparkling red color, but if the secretion is more or less diminished or altogether suppressed, not only is the blood issuing by the vein dark colored, but the whole organ assumes a purplish tint, more or less deep This change of color has, with some show of reason, been referred chiefly to the non-separation of water during the suppression of the function of the kidney

Nasse has shown that if blood be diluted with water it assumes a dark red color, if the blood be previously dark colored, it becomes still darker on the addition of water, and if the blood corpuscles be examined under the microscope, they are found to be distended, to have lost their discoid form, and to have become spherical, the blood collectively therefore must appear darker, since each individual corpuscle has become converted into a spherical mirror, from which the red rays are scattered and reflected

It has been shown by the experiments of several physiologists, that when the red blood corpuscles are in normal amount, a certain quantity of urea added to the blood scarcely produces any effect upon them, but on adding the same quantity to the same amount of blood, from which a considerable number of blood corpuscles had been withdrawn, a very striking effect was at once observed—the corpuscles rapidly assumed a vermilion tint, and sank to the bottom, presenting the appearance to the naked eye of fine vermilion, and on examining this sediment with the microscope it was found to consist entirely of red corpuscles, reduced to about a sixth of their natural size The effect of the urea seemed to be in exact relation to the quantity of red corpuscles in the dependent portions of the blood, resembling fine vermilion, as in the preceding experiments, and this appearance must not only be referred to the loss of fibrin, but also to the action of the urea

The blood of yellow fever containing more or less urinous excrement, and with a physical alteration and actual diminution of both the albumin and fibrin, is not only ill adapted to the nutrition of the organs, and actually conveys to the stomach materials which when eliminated alter so completely the properties of the gastric juice, as not only to arrest digestion, but also to irritate and corrode the mucous membrane, but it is also by its physical and chemical constitution unsuited to the maintenance of the general capillary circulation

Both Bernard and Poiseuille have observed that fibrin when in intimate mixture with a due normal proportion of albumin, facilitates the movement of the blood, but if the fibrin be withdrawn the blood globules fall to the most dependent part, and obstruct the capillary circulation

Bernard has recorded the observation that when the capillary circulation in the web of the frog's foot is examined under the microscope, the globules are seen suspended nearly uniformly in the liquor sanguinus, but if we examine this circulation in an animal whose blood has been defibrinated, we see the globules fall to the most dependent part, while at the superior parts, pure liquor sanguinis alone circulates If a horizontal vascular trunk bifurcates in two divisions not situated on the same horizontal plane, the lower branch will be plugged by the accumulation of the globules, while the upper branch will be full of serum

Not only are similar causes active in producing the capillary congestions which are so characteristic of yellow fever, but the altered albumin and fibrin coagulate in the secreting and excreting structures of the liver and kidneys after its transudation through the walls of the capillaries and biliary and urinary tubes To these changes of the blood, therefore, must be referred, to a great extent, the suppression of the functions of the liver and kidneys, for it is very evident that in the case of the liver the obstruction does not exist in the biliary or hepatic ducts, but in the biliary tubes

It is evident that certain changes in the blood, as well as certain nervous symptoms in yellow fever, are due to the retention of bile in the blood

Next to black vomit, jaundice occurring in the febrile stage of yellow fever is the most fatal symptom Many observers regard jaundice as unfavorable in proportion to the earliness of its development, some writers considering jaundice as surely indicative of a fatal termination, when appearing upon the first or second day, or up to the third, fourth or fifth day

Mr Maher says that the period at which jaundice makes its appearance during the course of the disease is, according to the observations of Dr Belot, a prognostic sign of great certainty When it appears toward the third or fourth day, death will infallibly ensue, if it occurs toward the fifth or seventh day, the probability of a fatal issue is greater than that of recovery, finally, when it manifests itself only after the seventh day from the period of attack, recovery is almost certain (*Rapport Médicale sur l'Epidémie de Fièvre, Jaune*) The most valuable statistics with reference to this symptom have been furnished by Daniel Blair (Some Account of the Last Yellow Fever Epidemic of British Guiana" Third Edition, London, 1852, pp 79 83) According to this accurate observer "Yellow skin was always a sign of great intensity of disease Among the 2,071 milder and graver cases, 385 had *yellow skin,* and of these 385, 178 died Thus the proportion of cases in which the symptom appeared was 18 54 per cent, and the rate of mortality of the symptom was 46 23 per cent

The following table will show the number of cases in which yellow skin was observed on different days of the disease, the number of deaths, and rate of mortality for each day, and rate per cent of symptoms

YELLOW SKIN AND BLACK VOMIT

122 Deaths						22 Recoveries					
40 Cases Simultaneous		45 Cases preceded		22 Cases Succeeded		6 Cases Simultaneous		6 Cases preceded		10 Cases Succeeded	
Day of Disease	No of Cases	No of days preceded	No of Cases	No of days succeeded	No of Cases	Day of Disease	No of Cases	No of days preceded	No of Cases	No of days	No of Cases
3d	3	1	28	1	15	3	1	1	3	1	5
4th	14	2	10	2	4	4	1	2	2	2	2
5th	9	3	5	3	2	5	2	4	1	3	2
6th	10	4	1	7	1	6	2			4	1
7th	3	5	1								
8th	1	0	0								

Black vomit, although a very unfavorable symptom, and more so than yellow skin, being as 75 68 to 46 23, is still not necessarily fatal Out of the 366 cases of it, 277 only died, giving the centesimal mortality just stated, viz, 75 68 Yellow skin and black vomit were closely associated as to the time of their appearance, but the former was generally the antecedent (fortunate for the patient when otherwise) Thus in 139 ascertained cases, the former preceded the latter in 51 instances, appeared simultaneously in 46, and succeeded it in 42 instances The double symptom of yellow skin and black vomit was of all others the most dangerous, and especially when the latter succeeded the former, and within twenty-four hours The co existence of these symptoms was observed in 144 cases, being 6 95 per cent of the 2,071 mitior and gravior cases admitted to the Seaman's Hospital Out of these 144 cases, 122 died, making the mortality of the conjoined symptoms 84 72 per cent

The following table shows the day of the disease on which yellow skin and black vomit occurred simultaneously, also the number of cases in which the former preceded or succeeded the latter, and the number of days it so preceded or succeeded

TABLE SHOWING THE NUMBER OF CASES IN WHICH YELLOW SKIN WAS OBSERVED ON DIFFERENT DAY OF YELLOW FEVER, THE NUMBER OF DEATHS, AND RATE OF MORTALITY FOR EACH DAY

Day of Disease	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Unascertained
Total number of cases	8	16	46	89	86	66	30	18	7	8	5			3	1	2
Number of deaths	1	4	18	44	53	27	13	10	1	3	2				1	1
Rate of Mortality	12 5	25 0	39 01	49 15	61 63	40 90	43 33	55 55	14 28	37 5	40					
Rate per cent of Symptoms	0 38	0 76	2 22	1 20	4 15	3 14	1 45	0 57	0 34	0 38	0 29			0 14		

I have confirmed, by careful chemic analysis of the blood, and of the nervous structure and organs, the view held by some pathologists, that the yellow hue in jaundice observed in many grave cases of yellow fever is due to the presence of bile in the blood By careful post-mortem examinations, as well as by attentive observation of the amount and chemic constitution of the urine in this disease, I have been able to refer the accumulation of the bile in the blood in this disease to two causes, viz, structural alterations of the liver, attended with desquamation of the excretory cells, obstruction of the biliary ducts, with altered fibrin and albumin and oil, and the accumulation of free oil in the excretory cells, and structural alterations of the kidney, resulting in impairment if not total suppression of its function

Bile is a very common ingredient of the urine in yellow fever, even in those cases which terminate favorably, and as long as the functions of the kidneys are fully and freely performed, the blood may be relieved from any great accumulation of bile, even when the lesions of the liver are well marked, and from this cause the urine may be loaded with bile When the kidneys cease acting, the bile as well as the urinary constituents rapidly accumulate in the blood, and certain changes in the physical and chemical characters of this fluid are referable to the bile, as well as to the urinary constituents

In order to ascertain the effects upon the various functions resulting from the absorption of a large quantity of bile into the blood, but particularly with the object of tracing what becomes of the bile in the blood—whether it is transformed, or is excreted as bile, and, if transformed, what may be the nature of the changes it undergoes—Frerichs performed a series of experiments, the general results of which were as follows some of the animals died under symptoms of violent dyspnea (obstruction of the capillaries of the lungs), owing to the entrance of air into the lungs, or to the too great consistency of the injected fluid, twenty-nine of the experiments, however, succeeded in such a way that their results could be made use of In no case did any remarkable derangements of the nervous functions follow the injection, in no case was stupor, convulsions or retardation of the pulse observable, vomiting, however, occurred repeatedly in about one-fourth of the experiments, and in some of these cases also the injection of the bile was followed by some drowsiness The character of the urine which was voided after the injection varied, sometimes it contained a larger or smaller quantity of coloring matter, and at other times it contained none, the former was the case in nineteen, and the latter in ten, of the twenty-nine experiments The urine containing coloring matter was always passed in small quantity, it was of a greenish-brown color, became turbid upon cooling, and then appeared green, rapidly depositing flakes which, under the microscope presented a finely granular appearance When collected upon a filter, this deposit formed a dark grass-green layer, which dried readily, and which, when recently dried, exhibited the characteristic properties of the coloring matter of bile, becoming decomposed by the action of impure nitric acid, or by a mixture of sulphuric and nitric acids, with a lively play of colors of green, blue, violet and red The reaction of the urine was, in most cases, neutral or alkalin, the removal of the flakes of coloring matter was speedily followed by an abundant deposit of triple phosphates, the specific gravity of the urine varied When the kidney is examined after death, in these cases, the tubes are deeply tinged by the bile contained in their secreting cells, and some tubes are nearly or quite filled with cells which have been thrown off, while others have been formed upon the basement membrane beneath them

Dr Johnston concludes from these facts, that when the blood circulating through the kidneys contains an excess of bile, the renal cells, in striving to eliminate these materials, become deeply tinged by it, and many of them are so far modified as to be shed by a process of desquamation

The bile exerts a direct effect upon the kidneys, without doubt, inducing congestion and desquamation of the excretory cells in yellow fever, but the albuminuria, hematuria, and even total suppression of the functions of these organs, can not be referred wholly to the direct irritant action of the biliary products, but must, as in the albuminuria and desquamative nephritis of scarlatina, be referred to other causes also, as the irritant action of the poisons exciting the diseases, and the morbid condition of the blood induced by the action of specific poisons, as well as by the altered bile That the retention of bile in the blood is capable of inducing profound alterations in its constitution, is evident from the fact that in all cases of jaundice which last for a length of time, the blood becomes impoverished by a diminution in the proportion of red globules and fibrin, and a tendency is developed to hemorrhages from the various mucous membranes While this tendency to hemorrhage is practically observed in conjunction with cerebral symptoms and other indications of blood poisoning in cases of jaundice, when there is no obstruction to the bile ducts, it also occurs in cases of mechanical jaundice of long standing, in which the immediate cause of death is not unfrequently copious hemorrhage from the stomach and bowels

While Frerichs observed in his experiments no marked effects upon the action of the heart or nervous system, it is well established by clinical observation that the presence of bile in the blood frequently retards the action of the heart and diminishes arterial tension, the pulse becoming irregular and falling to 50, 40, or even 20, and presenting the same characters as the pulse in yellow fever, and it is equally well established that acute delirium, stupor, coma, muscular tremors and convulsions may supervene in cases of jaundice, where there is no obstruction of the ducts, as well as in cases of long standing mechanical obstruction The fact that slowness of the pulse is not an invariable symptom of jaundice has been explained by supposing that it is due to one particular ingredient of the bile, which does not exist in the blood in all cases of jaundice Thus, Rohrig has shown by experiments upon animals that the biliary acid salts exercise a specific paralyzing action upon the heart and retard its action, while bile pigment has no such effect, slowness of the pulse, therefore, in jaundice has been referred to the presence in the blood of unchanged biliary acids Notwithstanding that the blood of the human subject may be saturated with bile in jaundice, for long periods of time, without the manifestation of any serious cerebral symptoms, at the same time there are certain cases of suppression of the function of the liver, attended with cerebral symptoms of the most violent character, hemorrhage from the bowels, and profound alterations in the blood and urine, which can only be referred to the presence in the blood of the altered secretion of the liver

The theory advanced by Dr Austin Flint, that the cerebral symptoms in jaundice are due to the retention of cholesterine in the blood, does not solve the question, for if the retention of all the elements of the bile in the blood does not give rise to cerebral symptoms, it is impossible to understand how the symptoms can result from the retention of cholesterine alone, which is one of the constituents of bile

Cholemic eclampsia, attended with jaundice, and rapidly fatal tonic and clonic convulsions and coma, as well as that peculiar form of jaundice which is characterized by vomiting of blood, bloody stools, convulsions, coma and a rapid progress and fatal issue, evidently arise from the alterations induced in the blood by the constituents of the bile, and the products of their decomposition, resulting from acute atrophy of the liver, and present, not only in some of the symptoms, but also in the acute fatty degeneration of the liver and infiltration of the organ with oil, and the alterations of the heart and kidneys, a striking analogy to the grave cases of yellow fever

It is still a matter of dispute and doubt which element of the bile, or what products of the decomposition exercise the baleful influence on the nervous system in acute yellow atrophy of the liver According to Frerichs, the formation of leucine and tyrosine, crystalline products of the decomposition of albuminous substances, may produce the nervous disturbances Virchow, however, feels himself unable to grant this, because leucine and tyrosine are also found in typhus and exanthematous diseases, and may possibly be formed not until after death Bamberger, on the other hand, thinks it more probable that they are produced by the acids of bile, and by the possible products of their decomposition, and Dr Budd contends that they are due to some peculiar noxious matter evolved *in consequence of decomposition*, in the lobular substance of the liver, while Dr Charles Murchison holds that the poison producing the cerebral symptoms is more probably generated in the blood and throughout the body generally than in the liver particularly

The investigations of physiologists have shown that the liver not only excretes bile, but it forms grape sugar, and elaborates certain constituents of the blood, and exercises a continuous and important influence on the metamorphosis of matter constantly taking place in the blood and tissues

That the arrest of the function of the liver checks or modifies the normal healthy metamorphoses of the blood and tissues is manifest, not only in the physical alterations of the blood in acute atrophy of the organ, but also in the great diminution of urea, and the appearance in large quantities of leucine and tyrosine, which possess a composition intermediate between it and the albuminoid components from which urea and uric acid are derived

In acute atrophy of the liver, in acute phosphorous poisoning and in yellow fever, diseased states which have many symptoms and pathologic lesions in common, it appears that the albuminoid substances of the blood and organs, are split up into nitrogenous and non nitrogenous combinations, but the combinations of the oxygen of the blood are not carried far enough to produce the final result of the normal oxidation in the healthy organism, and in addition to the formation of leucine and tyrosine, and of various nitrogenous substances, the composition of which is not perfectly known, *fat* results from these changes, which not only imparts an oily appearance to the blood, but also from the arrest of the oil globules in the capillaries infiltrates the textures of the liver, heart and spleen, and induces in these organs fatty degeneration

(*To be continued*)

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PERITONEAL SUPPORTS—(LIGAMENTUM PERITONEI)

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(*Continued from page 598*)

The hepatic artery produces only a slight elevation of peritoneum until it reaches the hepato duodenal ligament, whence it aids in giving distinct outline to the border of Winslow's foramen on the right By opening an adult cadaver, well prepared for inspection, and then carefully incising the gastro colic omentum, one can see with perfection the shape and form of the left opening of Winslow into the lesser omental bag To obtain the best view of Winslow's foramen, however, the ribs on both sides should be removed and the stomach lifted well up Winslow's foramen will then be seen to have a distinct oval form as seen from inside the lesser bag, whose circumference is nearly all produced by peritoneal folds projected by the gastric and hepatic arteries

The splenic artery, I must say, contrary to some anatomists, does not run into the gastro splenic ligament until it nears its termination Beginning at the celiac axis it at first passes behind the ascending layer of the transverse colon or the layer forming the lesser omental sac It passes along the upper border of the pancreas in a spiral manner When it approaches almost to the spleen, it suddenly bends and gains entrance rather to the phreno splenic ligament than the right gastro-splenic ligament for the only arteries which distinctly run in the gastro splenic ligament are the vasa breviæ This splenic artery does not make very prominent folds in the peritoneum, or what it does make are very short

The spermatic vessels make evident projecting folds of peritoneum and give rise to the ligamentum infundibulo pelvicum, which is a sharp fold of peritoneum transmitting the ovarian and spermatic vessels and nerves The spermatic vessels give origin to the intersigmoid fossa which can be best noted, so far as my experience is concerned, in a spare infant of six months In such infants one can demonstrate by pulling on these vessels, exactly the formation of the intersigmoid fossa The deep epigastric artery produces peritoneal folds of varying sizes and is of no particular importance except directly at the origin, where the vas deferens and spermatic vessels pass around its outer side At its origin a fold of peritoneum is often manifest and no doubt aids in the final passage of viscera in hernia The fold frequently makes a depression, a fossa or peritoneal pucker, which predisposes to the formation of hernia

The veins produce some interesting folds of peritoneum which call attention to anatomic and pathologic points The ascending vena cava bounds posteriorly the foramen of Winslow, and in embryos and the dog the vena caval boundary is plain and suggestive as to the mouth of the lesser omental sac It produces a large, round, peritoneal fold The inferior mesenteric vein is of both anatomic and pathologic interest In the first place this vein varies very much in its termination It empties into the superior mesenteric vein at the junction of the superior mesenteric and splenic veins or, finally, it empties into the splenic vein It can be observed how this vein shifts from the middle line (superior mesenteric vein) over to the left side (emptying into the splenic) It may be stated that as animal life ascends, this vein moves toward the left to terminate, and hence the emptying of the inferior mesenteric vein into the splenic is a sign of higher life—apes and man The pathologic interest in the inferior mesenteric vein lies in the fact that, as it gradually shifts to the left, in the ascending scale of animal life it forms a well-known fossa—the fossa duodeno-jejunalis, which generally is about the size of a thimble and occurs probably in about 60 per cent of subjects The fossa is situated at the junction of the duodenum and jejunum I have observed cases where the inferior mesenteric vein passed nearly two inches to the left of the junction of the duodeno-jejunalis and in this case there was no fossa, but still a prominent peritoneal fold produced by the vein Hernia is liable to occur in this fossa The folds of peritoneum produced by fetal remnants of vessels are often large The urachus, the remains of the allanlois, does not generally produce manifest folds The two arteriæ hypogastricæ may produce peritoneal folds over an inch high, especially near the bladder Such folds could do no damage unless their mesentery either yielded, producing a pouch, or atrophied producing an aperture, allowing hernia to arise

The round ligament of the liver, teres-hepatica passes from the transverse fissure of the liver to the umbilicus This obliterated vein raises the peritoneum into a fold from one to two inches high It acts as the ligamentum suspensorium hepatis and it is surrounded by a part of the anterior mesogaster Should the ligamentum suspensorium hepatis become thin in any portion of its mesentery, a perforation might arise in it which might allow a loop of intestine to pass through it as frequently happens in the mesentery of a horse

Again, raised folds of peritoneum due to blood vessels are not the only phenomena in the peritoneum attributable to blood vessels We have large, thin and almost transparent areas in mesenteries which are due to lack of blood vessels The areas occur among the arches of the vessels and especially at the lower end of the ilium in the region of the ileo-coloic artery The areas in the mesentery toward the center are very thin, transparent and devoid of any visible blood vessels Such atrophic regions I have observed in man and dog, also horses who have a thin mesentery show very thin areas I should suppose that the perforated condition of the great omentum is similarly due to the atrophy of the peritoneal tissue lying distant from blood vessels

The nerves of the mesentery are derived from the abdominal brain or solar plexus They run along the blood vessels ensheathing them The bundles of nerves and great vessels continue parallel until the anastomotic vascular arches occur, toward the distal extremity of the mesentery, where the nerves begin to leave the blood vessels and cross the areas of the vascular arches From the beginning of the vascular arcades the nerves do not lie parallel to the vessels, but assume an independent course to the bowel The formation of a series of arcades leads to the separation and breaking up of the nerve bundles, after which many of the nerves reach the digestive tube by the shortest route

Dr Waite and myself, during two years, investigated some thirty bodies in regard to the viscera In a spare body we could strip off a fine, transparent, epithelial membrane from each side of the small bowel mesentery This epithelial membrane on each side was so thin that one could not perceive it between the finger and thumb It is the real peritoneum After these superficial layers are stripped off from each side of the mesentery, a dense fibrous layer remains—the membrana mesenterii propria The strong, white, tendon-like fibers in this mesentery proper are chiefly arranged in more or less thick bundles which gradually thin as they recede further from the arteries The membrane is thick and heavy at the roots of the arteries, binding in a solid mass the nerves and vessels

The membrana mesenterii propria is rigid and stiff at its base, preventing rotation or kinking of itself or of its vessels and nerves As the membrane reaches toward the bowel it thins, loses many bundles of strong fibers and becomes more and more transparent As it passes between the loops and arches of the arteries, by holding it up between the eye and the light, we can see the varying directions of the fibers These tendon-like fibers are not precisely regular in distribution, and yet they have some regularity, like the direction of the fibers in a uterine myoma

There are several layers of fibers running in gentle curves, always, thinning and disappearing as they become more distinct from the arterial loops In the typical cadaver, by which I now sit and write, Dr Waite and myself stripped off about a square foot of the superficial real peritoneal membrane on each side of the mesentery and by holding the long mesentery between the eye and a strong light, we could observe the various arrangements almost perfectly It appears that as these fibers of the membrane proper fill the space between the arterial arches and loops they sweep in curves from one vessel to another But the curving and interlacing fibers of the mesenteri membrana propria are firmly knit and bound into a tough layer, which holds with a firm grip the nerves and vessels in definite relation Just as soon as the membrane reaches the bowel where it divides to receive the bowel, the connective tissue suddenly increases In this body which lies before me, we could separate the superficial, peritoneal, epithelial covering from each side of the transverse meso-colon, bu the membrana mesenterii propria in the transverse meso-colon is exceedingly thin and as transparent a glass, except where a large vessel was firmly embedded in it The membrana mesenterii propria i very thin in the meso colon transversum just as it i in the great omentum, or gastro colic omentum A the peritoneum passed upward from the upper laye of the transverse meso-colon, it passes over the pancreas, but a strong layer of the membrana mesenteri propria extends around the pancreas firmly imbed ing it, for the pancreas is intimately attached to th peritoneum which lies in front of it, as it was onc in the gastro-colic mesentery, as one can typicall see it in the dog Hence, we can say with muc appropriateness in the actual examination of cadavers, fitted for the inspection, that the membrana mesenterii propria is the real mesentery That it is simply covered on both sides by a thin layer of epithelial cells which constitutes the serous membran That this serous layer can be definitely stripped of That the membrana mesenterii propria is the re neuro-vascular pedicle of the viscus at the distal en of the mesentery That it firmly embeds vessels an nerves in its bundles of fibrous tissue which generally run in parallel lines or layers along the arterie

One can prove that the chief bundles of fibers belong to the artery by dissecting out the artery when the mass of fibers will nearly all accompany the vessel The great bundles of fibrous tissue are held together by a fine white tissue (connective), the same kind that surrounds each vessel and makes its snowy bed No doubt this beautiful and useful arterial bed of areolar tissue, containing elastic fibers, saves many an artery from becoming an aneurysm, by equalizing its pressure and acting as a buffer against traumatism It would appear that as we depart from the original primitive mesentery that the membrana mesenterii propria lessens continually, as for example, in the mesentery of the small bowel it is typical in size, strength and thickness, it is small and thin in the meso colon transversum and finally in some parts of the great omentum it is scarcely visible

In looking over the chief anatomies for one hundred years, it is evident that the mesentery has been viewed as a double layered membrane springing up from the dorso-abdominal wall This membrane was indicating as inclosing the *viscus and the* vessels and nerves which keep it in existence The same view I find in modern anatomies The view is *not so expressly* stated, as implied, that the mesentery is simply a double layered membrane It surprises me very much that I can find but little reference to the fact that the mesentery is a distinctly *three-layered membrane*, consisting of two thin epithelial membranes and one fibrous connective tissue layer—the three together constituting the mesentery, *or the* neuro-vascular visceral pedicle That the mesentery has been *viewed as a double layered* membrane may be seen by examining the anatomies through Meckel, Hensing, Huschke (1797–1858, *German anatomist and embryologist)*, Luschka, Henle and modern English workers A work not at my command, but referred to by Professor Toldt of Vienna, shows that Thomas Wharton in his "Adenographic," published in *1656* (London) was the discoverer of the idea that the mesentery consists of three layers instead of two Wharton writes that he, in the presence of Glisson, demonstrates the three layers *of the mesentery on a 14-year-old* girl, whose body was very spare Wharton's discovery was confirmed by the anatomist, Verheyen in *1718* Toldt mentions that Bartholinus in 1686, and McEuler in 1746 *are credited* with investigating the three layers of the mesentery, in Haller's "Bibliotheca Anatomica" (1774) But the knowledge of these few anatomists seems to have been forgotten In later *times* Ranvier, of Paris (1875) with his exact methods and brilliant results took up the subject and announced that the mesentery consisted of three layers instead of *two*

In very early embryonic life the mesentery—a heap of cells along the intestinal canal—shows no indication of a *double-bladed structure* But it appears as a simple bed in which run the vessels and nerves It is faced with epithelial cells In this aggregation of mesodermic cells gradually increases connective tissue and in the last *month of intra*-uterine life fat collects in the meshes

The erroneous teachings of the old anatomists one would think would be buried with them, but one can easily see these errors propagated in *modern* journals I refer to what the Latin anatomical writers *curtly* said in the short sentence "*Organa intra et extra peritonevm sita*" The development of the mesentery will dictate that all organs lie outside of the peritoneum No viscus lies in the peritoneal cavity Some surgeons gravely pretend to attack the appendix posteriorly to the peritoneum Others with equal profoundness state that the appendix is an intra-peritoneal organ These statements and many others in regard to intra peritoneal organs are incorrect, for all organs lie entirely outside of the peritoneum The organs can be enveloped by peritoneum, but are never entirely inclosed by it

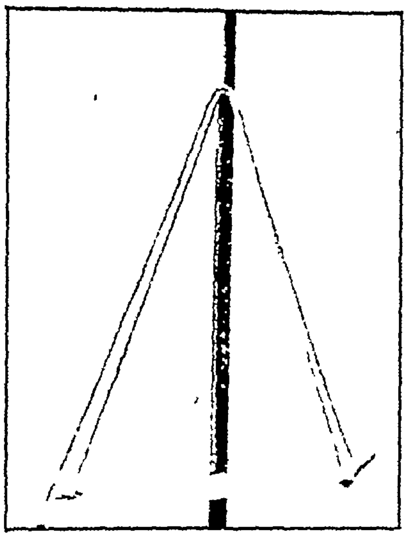
The mesenteries consist of two surfaces faced by smooth, shining pavement epithelial cells Between the layers of peritoneum composing the mesentery is a goodly amount of connective, elastic and *often* muscular tissue, which serves as a bed for the veins, arteries, lymphatics and nerves A mesentery is of varying thickness, owing to the amount of fat and other tissue lying between the epithelial surfaces In embryos it is very thin and as transparent as glass In horses it is sometimes over two feet long and very transparent Its use is to anchor organs to distinct *points, to limit viscera to* physiologic purposes by holding them in definite relations and allowing no entanglements or undue pressure The mesentery is a highway for vessels and nerves and possibly the peritoneal covering aids digestion, sustains relations for ovulation and preserves conditions for expansion and contraction The deviations of the mesentery from embryonic to adult life are the most manifest in the anterior and posterior mesogaster Such changes affect higher mammals the most notably As the stomach alters its primitive condition, the *mesogastrium* posticum or great omentum stretches out into a great sac, lying behind, to the left *and* below the stomach This sac (bursa omentalis) generally hangs down below the stomach and covers the small intestines in most mammals It has a varying relation to the colon transversum *in the ascending* grade of mammal life The great omentum begins in most higher animals to embrace the transverse colon from the right toward the left as may be typically observed in the dog *The mesentery* of the digestive tube lying posterior to the stomach retains a simple *primitive* character, especially when it is short The mesentery of the carnivora with their short digestive tube is far more simple than of the ruminant with his long convoluted canal The complicated *mesentery chiefly* arises in mammals who, from the nature of their food, require a long colon It is the growth of the colon and its mesentery which destroys simple mesenteric *relations* If the hind gut or colon grows it must grow forward from the neck of the navel loop and this quickly brings the colon with its mesentery in interfering relations with the lower and posterior end of the great omentum

The mesentery either arises from the heaps of *cells which* grow around and inclose the gut, subsequently elongating *into* a double loop of membrane, *or the mesentery* arises by coalescence of intercellular lymphatic spaces from fluid pressure aided by independent action of adjacent walls—in short, cleavage, evagination, *displacement*, folding and coalescence of the mesodermic layer

The mesentery of *the* small intestines (mesenterium) is a very variable element, as well as an important one It is directed from the lower end of the *duodenum* across the trunks of the great blood vessels and the vertebral column obliquely, *from left* above to right below The bony landmark is the second verte-

(one inch) to admit of application of elevated screw cap opening with screw cap for closure On bottom of trays is shown small flange, one-third of an inch, to keep the bottoms of the trays from contact with surfaces upon which they may be placed, which fits them for operating trays also There is a water-box one-half of an inch deep, holding about a quart of water for generating steam, with an opening in the center having an elevated flange like the top of a dinner bucket which fits into an opening in steam chest when in use, and a small opening with screw cap for the complete evacuation of the water-box

In order to use this sterilizer, place dressings in the deep tray and instruments, sutures, ligatures, needles, etc, in the shallow tray and both in the steam chest Fill the water-box, place steam-chest over water-box, which brings the elevated flange opening on the top of the water-box within the large opening in the bottom of the steam-chest, and fasten them together with the handles of water-box which catch on pin on end of steam box Place both over any convenient fire, it matters not what kind, and steam will generate soon (within five minutes or less by actual experiment over a good fire) This would give an outside time of thirty minutes as sufficient for sterilization of instruments and dressings, about the least time which would be required to prepare the patient and both could progress together in emergency cases as no special heating apparatus is required If, however, in a previously planned operation it is advisable to make the sterilization at the office, the package can still be lessened by closing the openings in the steam-chest with their respective screw caps leaving the water-box at home The weight of the whole package in either galvanized iron or aluminium is light and the closed package not bulky in the least The dressings are not made soaking wet, but about the moisture of Linton moist gauze



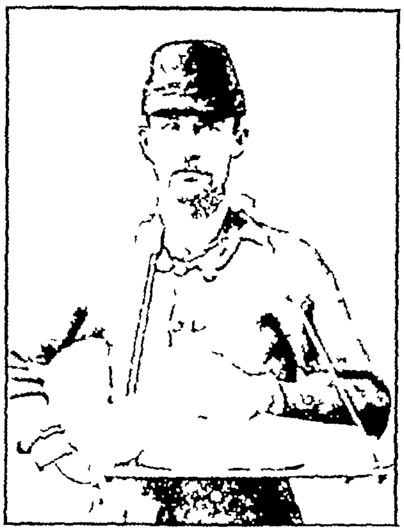
COST

These sterilizers are made from either galvanized iron or from aluminium For family use they can be made of tin and fitted with tray for bottles instead of instruments When made from galvanized iron, the wire bottoms of the trays should be galvanized also, but the bottom and side of the water-box should be of copper Such is the one I have in use, made by a tin establishment of this place and costing $5 including the outside case They can be made in aluminium at a cost of $15

Note—This cost in aluminium is an actual bid from a reliable firm for the manufacture of the first one in this metal I can affirm positively that they can be sold with a fair profit at or very near this price, and as my only desire is the aid to my professional brothers I will agree to communicate this offer to any respectable instrument-maker who will agree to keep the price of the instrument down to a reasonable profit upon them

BAXTER'S SWING SUPPORT FOR BADLY INJURED HAND OR ARM

The above swing support I have found a very great convenience in a large class of injuries occurring in my work among railway employees It gives no pressure upon the hand in any way, and holds it as steadily as if it were at the side in bed I have shown this to a number of physicians, some of whom have remarked "I have seen that before," but upon reflection have declared themselves mistaken and said that they supposed it was its simplicity which gave them their first impression If it is not a new device, I have been unable to find a report of its use anywhere in the surgical references at my command, and it should be more widely known for its convenience, as it will keep many a case on foot which would otherwise be confined to bed



SOCIETY PROCEEDINGS

American Electro-Therapeutic Association.

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept 25, 26, and 27, 1894

William J Herdman, M.D, President

(Continued from page 558)

George Gautier, M D, of Paris, France, presented a paper on

METALLIC OR INTERSTITIAL ELECTROLYSIS

Interstitial or metallic electrolysis is a use of the galvanic current that has many applications in electro therapeutics Personally I have been experimenting for three years with this therapeutic application of the current, with a view to define more clearly its method of application and demonstrate its use to physicians

Interstitial electrolysis takes place each time that we connect the positive pole of a pile or of a Gramme's, Siemen's or other machine with an oxidizable electrode of copper, zinc, iron, manganese, aluminium, etc, or when we decompose a solution of potassium iodid by the anode

The electrolytic products, which are different at each pole, can be made use of in two different ways, either they can be absorbed in great part with the help of oxidizable electrodes, or they can be diffused through the tissues with the help of unoxidizable electrodes We have at the positive pole different effects produced on the tissues, according to the nature of the electrode and the decompositions that take place there Thus with coal we produce a lesion deeper than with platinum and gold, which afterward suppurates and takes on all the characters of the cauterizations made by acids, fire or the thermo cautery

It is on this particular action that Dr Tripier founded an important branch of electro therapeutics, I speak of electrolysis or cauterization and destruction of living tissues by the continued current With oxidizable electrodes we have no destruction of tissues We have here instead a decomposition, giving rise to new compounds which are diffused into the tissues according to the direction and intensity of the current With iron we obtain an oxid, with zinc and copper a chlorid and an oxychlorid If we kill the animals that have served for experiments in metallic electrolysis with copper, we find oxychlorid of copper in places distant from the point of application, and the coloration shows that the diffusion is greater according the length of application and the intensity of the current I have some time since made a study of these different operative factors, i e, the current's intensity and duration, and have noted especially that operations of this kind produce neither destruction of tissue nor suppuration Since then, several years have passed, and I now wish to present to you a method of treatment whose value increases according as it is well known and above all well applied

I prefer copper for the oxidizable electrode and rarely use the zinc electrode, which has no advantage and possesses certain disadvantages, especially that of causing pain Iron is indicated in the treatment of fibromata without any inflammatory lesions of the adnexa or of the uterine mucosa In this case one avoids partially the cauterization that takes place in galvano-chemic cauterization or when the operator uses platinum or charcoal for the electrode

The electrodes of pure copper are, according to my experiments, the ones that give the most rapid results in a great number of cases I can not in this summary note describe all the applications of cupric electrolysis which I have made The physicians who devote themselves to electrotherapeutics know that I have endeavored to generalize the use of this method and that to make more varied its uses there would only be necessary a few changes in the *modus operandi*, such as was described by me two and a half years ago The following objections have been raised to this method of treatment

1 Cupric electrolysis is said to be very painful Indeed, it causes uterine pains which last sometimes three days, these pains are caused by the formation of gases or by a certain degree of inflammation of the mucosa Thus in chronic inflammatory diseases of the uterine mucosa, the patient feels after the sitting general pelvic and lumbar pain, which diminishes the first day after the operation and disappears on the second day, there is then a discharge of mucus and little clots of blood, and on the fourth day there is relief from all the pains of disease felt before the operation These post-operative pains can generally be relieved by an injection containing laudanum

2 Cupric electrolysis is said to predispose to hemorrhage I maintain, on the contrary, that the method is the best treatment against hemorrhage After the sitting we have often a slight flow of blood, even for two or four days, but afterward the effects of the treatment appear, the congestion is diminished and the vascular tissues are contracted Thus in chronic metritis, characterized by hyperplasia of the uterine connective tissue with an increase of sensibility, we can verify, after one sitting of cupric electrolysis, the most marked improvement The menstrual flow is subsequently diminished, the sensibility disappears and the patient is greatly relieved These post-operative reactions are easy to study in external applications In sycosis, for instance, the lips are swollen the first day, on the second large greenish serous patches are seen at the seat of puncture, after that the skin becomes normal in color and very supple But the treatment of external hemorrhoids shows most clearly the effects of the oxychlorid of copper When we puncture a large hemorrhoid the same evening the veins are dilated and swollen, the third day they are scarcely visible In this case also there is a slight flow of blood, but this is of slight importance, as the hemorrhoid so treated remains permanently cured

Others will explain better than I, the therapeutic action of the oxychlorid of copper It destroys inflammatory tissues, reduces quickly and effectually local congestions and finally possesses a real antiseptic power

DISCUSSION

Dr A H Goelet said that another year's experience with metallic electrolysis in uterine disease served to convince him more firmly of its value in this particular class of cases His views had, however, changed somewhat in the past year, in that he very much preferred zinc to copper He believed that Gautier had pointed out some time ago that the insoluble salt of copper, referred to by Dr Morton, was deposited beneath the surface, and this would explain why the benefit was not always apparent at once Last November he had been asked by Dr Bryant and Dr Lusk to see a case of persistent and obstinate hemorrhage complicating a fibroid tumor of the uterus which illustrated the delayed action of this method of treating uterine hemorrhage Dr Lusk had already curretted but without arresting the hemorrhage The speaker said he made four applications of cupric electrolysis in this case and observed only slight improvement at first, but advised a little delay One month later Dr Bryant told him that the hemorrhage had gradually ceased Six months later he reported that the patient was apparently perfectly well and there had been no recurrence of the bleeding The fibroid still remained

Dr Morton had said that we may use any metal, but he, Dr Goelet, thought the salts of iron were too irritating The same might be said of cupric electrolysis as the primary effect of the copper salts were highly irritating, and in the vagina even produced excoriations The result of zinc electrolysis was the formation of an oxychlorid of zinc which was not only antiseptic but caustic, an action often desirable The fact that the zinc electrolysis does not cause the electrode to adhere to the surface to which it is applied as does the copper is a great advantage in its favor Where astringency was needed, he had used silver, because the silver salt was astringent without being very irritating, and without causing the disagreeable adhesion to the tissues. He considered cupric electrolysis particularly advisable in cases of septic endometritis where for any reason it was considered unadvisable to curette He had had a number of cases in his clinic where septic endometritis had been overcome by a half a dozen applications or less He recalled particularly a case of distinctly gonorrheal origin which was completely cured by six applications of this kind The case had been kept under observation for many months so as to be sure of the permanency of the result In these cases, as well as in uterine hemorrhage, he now preferred zinc, as the result was more promptly reached and there was none of the disagreeable irritation which followed cupric electrolysis Another application of cupric electrolysis which has not been mentioned, was in the treatment of vulvo-vaginal cysts after evacuation of the contents of the cyst These cysts were obstinate in healing under the usual treatment, but under cupric electrolysis with a current of from 20 to 25 milliampères applied for five minutes, one or two applications usually sufficed to effect a cure In making use of these metallic electrodes in the uterus, it was necessary that the electrode should be in close contact with the tissues Realizing that Gautier's electrodes were inconvenient, he had had some electrodes made which he exhibited The hard rubber handles were so shaped as to indicate the direction of the point of the instrument The vaginal part of the instruments were insulated with soft rubber tubing, which by moving on the shaft allowed a larger or smaller surface to be exposed for action

Dr Margaret A Cleaves said that she had had the same experience as had Dr Goelet, regarding hemorrhage persisting for a while after the treatment and then stopping later on If the applications were made about the time of the menstrual period there was apt to be an exaggeration of the menstrual flow, but subsequent periods were more nearly normal In endometritis associated with dysmenorrhea, she had in three or four treatments given complete relief She was also more inclined to use the zinc than formerly, particularly in cases of erosion She had treated trachoma in the third stage by means of zinc electrolysis, and the improvement had been very marked and permanent although only a few applications had been given Gautier said that iron was indicated in fibromata, providing there was no inflammatory condition in the neighborhood She had used aluminium for a few months past in endometritis, but was not prepared to speak as to its value She continued to use cupric electrolysis in atrophic rhinitis with success, also in follicular pharyngitis In several cases of acute follicular tonsillitis a single application of cupric electrolysis, 8 to 10 milliamperes, had resulted in complete resolution In an epithelioma with extensive ulceration, she had had relief from symptoms, and tendency of ulcerated surface to heal from margins and bottom, from two applications of cupric electrolysis, but had not been able to follow the case up and could not give ultimate results In a case of beginning suppuration in a nurse's finger, from infection, a cupric puncture with 2 to 3 milliampères of current established resolution In specific urethritis in the female, she continued to find it prompt and efficient in action

Dr Walker said he had had a case in which he thought this treatment would show the advantages of metallic electrolysis A lady, ten years married, suffered from excessive menorrhagia every two weeks All medicinal means had been used before he saw her Copper electrolysis was tried between the periods and was followed by extreme menorrhagia As the next period was no better than the previous one, another application was applied given in the interval This was followed by much the same result With much difficulty she was persuaded to submit to still another application The result was the same, and the electrical treatment was discontinued After this menstrual period, as she was going to New York City, she was advised to call upon Dr Goelet, but a few days ago she had come into his office and reported that she was well She said that she had not been to Dr Goelet's because her next period had lasted only seven days, and the next only five, so that she did not deem it necessary to seek further advice

Dr O S Phelps, of New York, said he wished to report a case in which this treatment had been tried It was one of mucous cysts of the tongue occurring in a patient 25 years of age The tumor was about the size of a hen's egg It had been operated upon once in Germany and several times in this country, so far as could be ascertained, by evacuating the cyst and by injecting iodin and similar remedies The speaker evacuated the cyst and made two applications of cupric electrolysis about five days apart The result was a perfect and permanent cure The Doctor also exhibited a set of elliptoid electrodes which he considered quite a triumph for the instrument-maker They were made by depositing copper on hard rubber with the idea of avoiding the great weight of an electrode made entirely of metal The particular form of the electrode had been selected because with the egg-shaped electrode he had found that it was often difficult to withdraw it in cases of urethritis

Dr Dickson asked Dr Goelet as to the present status of cupric electrolysis in the treatment of uterine fibroids

Dr Goelet said that his personal experience had been that cupric electrolysis was only useful in the way of controlling hemorrhage and that no greater reduction of the size of the growth had occurred than with ordinary electrolysis He had found that zinc would control the hemorrhage just as well as copper, and the beneficial effect was more quickly obtained Others had had a similar experience Zinc also affected, more materially, the size of the growth

Dr J J Putnam asked what was the effect upon cell growth of this deposit of metal by the current in the deeper tissues Was there any effect from the treatment other than that on the circulation and nutrition?

Dr Beaver said he would like to hear further from Dr Morton regarding the results he had obtained in the treatment of trachoma by metallic electrolysis So far as they had reported them they appeared to be exceptionally good, as he understood the average duration of treatment had been only about one month

Dr Morton replied that the details of most of the cases would be published

Professor Dolbear said that Dr Morton had spoken of the value of copper, and Dr Goelet of the value of zinc in metallic electrolysis, he would suggest that brass, which wâs an alloy of these two metals, might be as good as either of the metals separately

Dr Morton said he had tried brass electrodes, and had found that they gave a prompt depósit of copper He remembered that Gautier had made allusion to the possible presence of an insoluble salt in the tissues, but he did not recall any absolute demonstration of its existence In all his experiments in the laboratory with iron, he could not induce the deposit of iron to spread far from the electrode, which was in marked contrast to the behavior of copper He thought the zinc diffused as well, or possibly even a little better than the copper A patient had come to his clinic with a tumor of the parotid gland, and it had occurred to him to test metallic electrolysis upon it A copper needle was plunged into the tumor and the metal freely dissolved off the needle by the current Before doing this a piece of the tumor had been removed by the trocar The microscopic examination of this showed it to be a round-celled sarcoma The metallic electrolysis had not the slightest effect on this sarcomatous growth In answer to a question by Dr Putnam as to the action of this form of electrolysis on cell growth in general, he could only say that he knew of no exact observations on this point There were certainly no effects on the cell growth in the case of sarcoma just alluded to He thought there would be an effect on the nutritional processes by the presence in the tissues of a soluble and an insoluble salt of the metal of which the electrode was composed

The President said that his experience with metallic electrolysis had been chiefly in treating inflammations of the surface membrane—in endometritis and in gonorrhea—and he thought that in these cases there was a wide field for its action In almost all the applications of local remedies hitherto made, the albumin of the tissues has been coagulated by these applications, and the bacteria in this way shut off, as it were, from the effect of further applications On the contrary, by metallic electrolysis one was able to ferret them out and destroy them He had never found anything so satisfactory for the treatment of gonorrhea, and his assistant had reported that she had obtained remarkably good results with it in endometritis

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SELECTIONS

Contributions to the Theory of Respiration—(R Arnheim, Du Bois Reymond's Arch 1894, and Inaugural Dissertation, Berlin, 1894) A digest of this work is stated by the writer as follows i, the acceptance of a single co-ordinating center is necessary for a satisfactory interpretation of the normal mechanism of respiration, ii, the stimulation of Gad's respiratory center in the medulla oblongata alone results in strong activity of the whole process of respiration iii, the changes of respiratory activity which hitherto have been attained, experimentally, from all portions of the central nervous system above the medulla oblongata do not depend on stimulation of specific centers, but are to be regarded as effects of irritation of the tracts leading to the respiratory center—*Centralblatt für Physiologie*

Contribution to the Study of Gastric Digestion, Under Unusual and Abnormal Conditions—(Penzoldt, *Deutsche Archiv fur Klin Medicin*, Bd LIII, Hft 3u 4) The investigations comprise the behavior of hydrochloric and lactic acids, albumin, peptone and sugar The time of appearance of free hydrochloric acid in health depends, aside from slight variation in the individual, upon the quality and quantity of the food Very generally food which remains long in the stomach draws out the muriatic acid later than that of short duration The former commonly contain much albumin, a circumstance which as unprejudiced experiments showed, is responsible for the delay of muriatic acid The positive reaction of muriatic acid continues longer in the case of food containing little albumin than in that rich in albumin

The writer ascribes no practically useful importance to the Uffelmann lactic acid reaction It appears in health after ingestion of the greatest variety of food and drink, either from the beginning to the very end, as it is so variable in its appearance, that it furnishes no positive diagnostic points Albuminous substances in solution are found in the stomach only in small amount and are altogether absent in the last part of gastric digestion Peptone reaction follows albumin reaction with only unimportant variations One can therefore assume, that, as the coagulated albumin begins to dissolve under the influence of the digestive fluids the formation of peptone also begins Search for sugar after ingestion of carbohydrates always results negatively, unless the percentage of carbohydrates in the food is over 10, while after food containing large amounts of carbohydrates, sugar can be regularly demonstrated Comparatively often the sugar reaction disappears early, even long before the stomach is empty It appears therefore that the prevailing rule for other substances as peptone, is applicable to sugar that materials dissolved in water diffuse more quickly out o the stomach than in any medium acting as a solvent in the stomach—*Centralblatt für innere Medicin*

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SATURDAY APRIL 27, 1895

THE COMING MEETING

Every reader will notice that the program of the papers to be read at the Baltimore meeting is of more than usual interest The topics are less hackneyed, newer and more suggestive, and the readers include many of the leading medical men of the country The central location of the meeting should attract a large number of persons who have not been regular attendants

Notwithstanding the foolish criticism and even condemnation of many persons, the fact has become more prominent than ever, that this ASSOCIATION represents the progress of medical science in America more distinctly than any other organization In its membership are the teachers and specialists and general practitioners from all over the country The theorists and dogmatists who arrogate to themselves all there is of science, come in contact with the village and country physician and go away wiser The teachers and specialists, from the circles of flattery and hero worship, are astonished at the low estimate their theories sometimes receive The papers read before admiring friends receive cold criticism from strangers, and scant comment The surgeon and obstetrician are startled to find the same operations have been made, and sometimes improved on, by men from smaller circles of life Thus the process of disillusionizing and breaking up the narrow conceptions of truth, and the personal equation of enthusiastic men, give the ASSOCIATION meetings a value that the real student fully appreciates The credulity and jealousy of narrow circles of professional activity, disappear in the open frank opinions of men from widely separated sections who rise above personalities This is the point toward which the scientific work of the ASSOCIATION is rapidly drifting The reader of papers is judged from a different point of view than at home in his local or State society His work comes to a relatively higher court, and must rise or fall on its merits alone Many men overlook this fact, and lose their energies in the natural friction of the organization and management of the ASSOCIATION They forget this is only a small part of the real work, and the precise rules and plans of working, while essential in many ways, are largely self limited and self-perpetuated

The real work—which will live, are the contributions to science, the discoveries of new laws and new phases of old truths Papers embodying new facts go into the world s literature through these ASSOCIATION meetings more positively than by any other source The physician who aspires to lead in the march of scientific discovery has an open field here with fewer rivals He can plead the cause of truth at the bar of the world, and its judgment will be just and clear Literally, the physician in every section of our country should consider it a rare privilege to become a member and attend the meetings Every year the topics of medicine are widening and deepening in interest and no man can practice successfully and not keep in personal touch and contact with these great issues The man who excuses himself from joining the ASSOCIATION because of its politics, its Code, or the possible " rings," is losing his sight and, like a belated traveler, is struggling in the darkness of his own conceit The man who sneers at and condemns the scientific and literary work of the ASSOCIATION is like a camp follower far in the rear, shouting frantically to the warriors in the front line of their mistakes, and how to conduct the battle Finally, the man who is ashamed to join the ASSOCIATION and take an active part in its yearly meetings, because it will bring him in contact with persons less trained and of lower caste, is hopelessly stricken with *marasmus*, and needs all the time possible to prepare for heaven

What shall we say of the *Ego-Maniasts*, whose great erudition and high attainments are not quickly recognized by the ASSOCIATION, in the bestowal of honors and offices? Men who drop out of the ranks disaffected and chagrined, we leave to their fate The coming meeting should bring to our members an inspiration and wider spirit of devotion and interest to medicine, and personal acquaintance, with the rest of new scenes and new surroundings that will be felt through all the year

The city of Baltimore offers rare attractions, and the annual pilgrimage of the AMERICAN MEDICAL ASSOCIATION will find here a veritable *Mecca* that will help us all far on the road to the ideal society and ideal meeting

DIFFERENTIATION OF SPECIES BY THE BACTERIOLOGISTS

The Water Committee, of the American Public Health Association, which is organizing a co-operative investigation into the bacteriology of water supplies, is making haste in a slow sure way We learn that every bacteriologist of note in the United States and Canada, and many of the earnest younger workers, have volunteered in the cause As a result of a preliminary inquiry into the methods to be adopted, there has been developed the weak point of bacteriologic laboratory work The subcommittee on the methods of laboratory procedure, after a full consideration of the schemes in use by the various volunteer laboratories, has concluded that it would be unwise to make any effort at the differentiation of species by our present inexact methods Differentiation is now made with comparative certainty only after studying a dozen or more physiologic characteristics It is true that under unvarying conditions constant results may be obtained and parallel results under parallel conditions, but it is well known that varieties may arise from divergent conditions in laboratory methods, and hence the necessity for the best scheme of laboratory work in such an investigation as that proposed by the committee. In the opinion of those who have given the matter most consideration, there appears to be little doubt that the present bacteriologic methods fail to inhibit the production of varieties during the course of laboratory study, and that until life histories can be controlled and reasonably normal environment be obtained, there is little hope of a satisfactory differentiation of species In fact, with increasing knowledge of bacteria along the present lines of investigation, comes increasing difficulty in differentiating

The committee, therefore, considers that the time has arrived when bacteriologists should come to a halt, and ask themselves what is the cause of this state of affairs and what can be done to remedy it? It proposes to meet these questions boldly In a circular letter just issued to the bacteriologists interested, it indicates in a general way the errors in the present methods, and calls a meeting in New York city in June, to consider and establish the first principles of the subject and place them on a more substantial foundation To facilitate discussion and to aid the bacteriologists of the several laboratories in gathering together the evidence which they have at hand, the committee submits twelve questions on which it is assured that the laboratories can bring forward much valuable and hitherto unpublished data The settlement of these questions will enable the committee to elaborate its scheme of laboratory procedure and permit the co-operative work on the bacteriology of water to progress on lines leading directly to the advancement of bacteriologic knowledge, as well as to the practical sanitary results desired by the American Public Health Association

The work of this Water Committee carried out in the careful and effective way indicated by the present action of the committee promises to be one of great value It is a work, however, that should now have been in progress under the supervision of a United States Commission, such as was proposed by the bill introduced into Congress by Mr Bartholdt, for the investigation of the pollution of water supplies where such pollution affects or threatens to affect the sanitary condition of the people of more than one State, or better still, under the direction of a Department of Health such as has been urged by the members of the American Medical Association

PERMANENT CURE OF RHEUMATISM THROUGH MISADVENTURE

Dr Alan T Sloan reported in the *Edinburgh Medical Journal* for February a very interesting case of successful cardiocentesis In a hurried attempt to tap the pericardial sac, the right ventricle was entered The patient, a young woman of 19, was at the time in a very low condition—"practically moribund," as some one has expressed it The attack was one of acute rheumatism, subsequent to a sharp attack of facial erysipelas, there was the complication, well nigh fatal, of pericarditis with effusion In fact, the announcement had been borne to him that the woman had died Dr Sloan found her with a pulse too feeble to be counted and with the facial pallor of death He gave her two subcutaneous injections of ether, whereupon pulse and respiration ceased In the excitement of the moment the physician took up his aspirator and plunged the needle in the fourth interspace about half an inch to the left of the sternum Much to his surprise there flowed rapidly into the bottle of the aspirator eight or more ounces of pure blood, showing that the right ventricle of the heart itself had been entered by the needle The physician felt that all chance for recovery was gone forever He adds

'As I was slowly withdrawing the canula, regretfully telling the nurse that it was all over, and to close the patient's eyes, to my surprise the heart made first a feeble irregular movement, then gave a sudden strenuous jump, and finally, like a pendulum regaining its swing or a runner his stride, it started to beat again in the race for life In moments of intensity it is difficult to estimate time, but I should say fully half a minute had elapsed between the introduction of the needle and the re-starting of the heart beats It was an extraordinary sensation to feel the heart beating more and more forcibly against the point of the canula, which was gradually withdrawn so as not to further injure the heart wall I was standing thus, with my thumb on the puncture made by the needle, when Drs Bramwell and Smith made their welcome appearance My uppermost feeling at first was one of regret that I had converted a patient practically dead into *one apparently dying*, and sincerely did I lament that she had not been left *to pass away in peace, for a most pitiful scene* was now enacted for an hour Occasionally there was given a heartrending shriek, quantities of frothy mucus were half coughed half vomited, and had to be swept out of the mouth with a towel, the blood went ebbing and flowing from the cheeks, which were first ashy gray then purplish in hue, the pupils were dilated to their fullest extent, the running following pulse was quite unaccountable, and the patient had every appearance of one dying asphyxiated "

The cardiocentesis was supplemented by ether subcutaneously injected, the result of which was a *maniacal excitement that required opiate treatment* DR SLOAN continued free stimulation by the mouth with brandy and champagne The patient's condition improved, so that forty-eight hours after the puncture there was a return to normal temperature and to a pulse of 40 Two months later she was sent away into the country, and four months still later she reported as being restored to perfect health

There have been other cases of accidental puncture of the heart, when the intended operation was only a paracentesis of the pericardium One by ROGER, in 1872, the right ventricle of a child was entered, drawing off six ounces of blood, the child was suffering from pericardial effusion The patient recovered from the effects of the operation, but died five months later from failure of compensation

DR SLOAN, in looking up the literature of the subject, found other cases where relief was obtained by cardiocentesis, but his own is the first he was able to refer to as a "permanent cure" He opines that, among other conditions, narcosis from chloroform will be found to be one that will sometimes respond to the aspiration of the heart

THE MANAGEMENT OF PREGNANCY COMPLICATED WITH UTERINE FIBROIDS

It is generally held by gynecologists that the presence of myomatous masses, either subperitoneal or invading the uterine cavity (especially the latter), favors sterility, and, in the opinion of EMMET and other competent observers, the converse of this proposition is also true, since uterine fibroids are most frequently encountered in unmarried women In many instances this particular form of hyperplasia is associated with gross lesions of the tubes and ovaries, abnormal conditions of the endometrium, and functional irregularities, which in and of themselves are *unfavorable to impregnation*, and which are so intolerant of the presence of impregnated ovum that miscarriage frequently occurs In other cases, the abnormality of these associated organs permits the escape of the ovum into the peritoneal cavity, and abdominal pregnancy is the consequence Even when gestation proceeds regularly, the development of the uterus must be unsymmetrical, and much pain and discomfort is occasioned thereby The growth of the tumor is also likely to be stimulated by the gravid state of the organ, and its rapid enlargement may give rise to pressure symptoms, or produce conditions which cause a more or less serious problem for the consideration of the accoucheur Finally, *the danger to the mother does not terminate with the* safe delivery and birth of the infant, for the complication causes the puerperal period to be extended, part of the growth may slough during involution, or gangrenous endometritis may give rise to fatal septicemia At the last meeting of the Philadelphia Obstetrical Society, DR ANNA M FULLERTON reported a case of this kind It was a primagravida at term, in which labor was complicated with a large fibroid, over the site of which the placenta had been attached Two hours after a forceps delivery, sudden death occurred, which was attributed to the entrance of air *into the uterine sinuses, rendered persistently* patulous by the non-contractility of the fibroid tissue

The uncertainty as to the prognosis concerning *the puerperium of a woman suffering with* uterine fibroids, was well illustrated by the reports in the same communication of several cases occurring at the Woman's Hospital *The first died as above stated* The second, by constant medical attention, was carried to full term Labor was greatly protracted owing, to the inefficiency of the uterine contractions, and was terminated by the forceps, the child, a large boy, was born asphyxiated and could not be resuscitated The mother made a good recovery The third case was especially interesting It was a farmer's wife, 42 years of age, a primagravida She had multiple fibroid growths, some in the lower uterine segment, and had been previously advised by two distinguished gynecologists to have a Porro operation performed at term in order to accomplish delivery *Premature rupture of* the membranes occurred, however, at the end of the eighth month, and delivery was accomplished by high forceps, the child, a female weighing 2,710 grams, was extracted, and three weeks later mother and child left the hospital in good health Thirteen months later the patient again presented herself, pregnant and near full term The *tumors had increased* in size, so that version had to be performed, the after *coming head* was *caught* by a projection from one of the tumors and caused some delay The *child, a large boy,* lived only twenty four hours Eighteen months later, the patient again applied at the hospital, as before, and was delivered at term, instrumentally, of a girl weighing 3,100 grams Both mother and child did well It is most interesting to note that since the last delivery the tumors have markedly decreased in size A fourth case, primagravida, 29 years of age, aborted at the termination of the sixth month of utero-gestation After expulsion of the product of conception, it was found that a large submucous fibroid, about the size of the fetal head, completely filled the uterine cavity The uterine wall in the part which had covered the ovum, was exceedingly thin The patient did well until the thirteenth day, when sepsis developed Hysterectomy was recommended , but consent was not obtained until six days later, when the patient was moribund General sepsis preceded death and rendered any operation improper The specimen showed the uterine cavity filled with the large submucous myoma, in a state of degeneration, the endometrium was gangrenous Death was caused by the sloughing of the fibroid and gangrenous endometritis which had produced septicemia Other specimens were shown of large uterine fibroids removed by hysterectomy and supra-vaginal amputation Two presented deep-seated fibroids, which were attended by distressing pressure symptoms, in the removal of which the reporter felt that the supra pubic method of treating the stump would have been extremely difficult, if not impossible

The occurrence of pregnancy often constitutes a grave complication of uterine myoma, and the majority of cases so complicated require surgical interference, even when the growths do not encroach upon the area of the superior strait in such a way as to make delivery, *per vias naturales*, an impossibility The records of the cases cited showed the period of gestation to be one of unusual suffering and discomfort with a constant disposition to premature delivery, rendering protracted rest in bed and the free use of anodynes a necessity When labor comes on, it begins usually with premature rupture of the membranes, and is characterized by the irregularity, inefficiency and severity of the pains The paper was followed by an instructive and spirited discussion DR B F BAER boldly maintained that a woman suffering with fibroid tumors of the uterus ought not to be required to furnish citizens to the State, unless she wished to do so, with a full knowledge of the risk incurred by pregnancy, and if she demanded relief, it was the duty of the surgeon not to withhold that relief, but to proceed to operate, either by removing the uterine appendages or by hysterectomy He reported a case of a woman who was four and a half months pregnant when the tumor dropped into the pelvis and pushed the uterus up into the abdominal cavity, it could not be replaced and the woman was exceedingly ill He advised laparotomy and performed a hysterectomy, because the growth appeared sarcomatous, amputating at the supra-vaginal junction The patient made a good recovery and is still in perfect health, although the operation was done a number of years ago

DR CHAS P NOBLE spoke of the dangers of peritonitis and sepsis, and said that the mortality of the complication was 50 per cent When the fibroids are of considerable size, the case should not be left to nature He advocated a Porro operation rather than a subsequent hysterectomy, but the cases have to be individualized and can not be treated according to any fixed rule

DR M PRICE favored the Porro operation, and especially directed attention to the mental state attending fibroid tumors These patients are not only chronic invalids, but many of them are in a nervous condition bordering on insanity He said that in the last two years he had not operated upon a single one that was not mildly insane

DR J M BALDY considered that the dangers of the complication had been much exaggerated, and cited cases where all the preparations had been made for a Cæsarean section, but the women had delivered themselves without any difficulty He would be very loth to act upon the assumption that because a woman has a fibroid she should be denied children, or that her pregnancy might be ended if she wished to have it so He mentioned a case in which celiotomy had been decided upon for fibroid growths, but for some reason it was not performed , the woman afterward went home and became the mother of a child He referred to one of DR FULLERTON's cases which had been three times delivered and had two living children He denied that any special nervous conditions or mental disturbance belong to the clinical history of fibroids more than to other instances of pelvic disease He objected to the extra-peritoneal method of treating the stump, and asserted that hernia was a common result By dropping the stump, he eliminates a large and important factor in the production of abdominal hernias

The difference of opinion brought out in the foregoing discussion, serves to illustrate the unsettled state of the subject at the present time There is much information to be gained as to the direct and indirect causes of fibroid growths of the uterus, and their life history, before anything like a settled rule of practice can be formulated which would apply to a large proportion of the cases Especially are the difficulties of the problem enhanced by the unusual complication of fibroids with pregnancy When authorities disagree so widely as to advocate hysterectomy or removal of the uterine appendages, in opposition to those who are perfectly willing to allow the case to proceed to full term without interference or only symptomatic treatment, the plain ordinary everyday practitioner will have to rely upon his own judgment in the management of his cases, feeling assured that whatever course he decides to pursue, he can find good authority to sustain him As a matter of fact, no general rule can be laid down for the management of these cases of complicated pregnancy Each case must be treated on its individual merits in the pious spirit in which good old AMBROISE PARE practiced surgery, saying to his patients "*Je te panse, Dieu te guerit*"

A GENERAL WITH PRONOUNCED SANITARY IDEAS

General DuChesne *is the chief commander of the* French forces that are to be sent to Madagascar He has recently issued an order or proclamation, showing the profound respect he has of sanitary regulations for troops that are to go to a strange country and climate In this order he advises with his men to the end that they will observe with strictness all the regulations framed to protect the troops from disease, and especially from malarial disease On this point he is quoted in the European edition of the *Herald* as saying

"One of the greatest dangers which the troops will have to encounter will be that of the malarial fever of the country All possible measures have been taken to combat it, and the General hopes that the efforts of the sanitary staff will be rendered efficacious by the obedience of the troops to the orders given them 'The best commanded regiment,' he says, 'will for me be the one in which the fewest cases of illness occur'

"The most severe orders are given for the humane treatment of the natives All the persons and property of the friendly Malagasy are to be respected, and the soldiers of the enemy, once they are disarmed, are to be accorded all the rights of civilized warfare and are to be treated with justice and humanity"

American Medical Editors —Dr Canfield, of the *Maryland Medical Journal*, has completed the arrangements for the editors' banquet Members of the Editors' Association desiring to attend will please send him their names at once, stating the number of plates they wish reserved

Notice —All persons attending the meeting who desire to secure return transportation at Baltimore, must obtain a certificate from the agent of the railway at the starting point, showing that they have paid full fare to Baltimore

CORRESPONDENCE

Pennsylvania and "That Awful Code"

Marienville, Pa, April 15, 1895

To the Editor —In the Journal of April 13, Dr Simonton takes one more whack at the Code, and the Philadelphia County Medical Society That society is amply able to defend itself without my help But the position of the Philadelphia County Medical Society is the position of the Pennsylvania State Society, and as a member of that body I wish to say a few words in reply to the Doctor and incidentally to all others concerned I was the wicked fellow who presented the resolutions regarding the Journal and the proprietary advertisements at the Philadelphia meeting, 1894 *Those resolutions* were handed me by some of the most distinguished members of the Society Dr E E Montgomery, one of the American Medical Association Trustees, was, I *think*, on the floor of the convention at the time Not a man there but what *respected and honored* Dr Montgomery, and our personal or professional relation to him was not called in question So with the Editor, every member of the Pennsylvania *Society* who knows of the ability of Dr Hamilton has but the highest praise for the successful management of the editorial department of the Journal If this subject must be opened again let it be in that spirit, *and undue* sarcasm and personalities be *completely* dropped out of sight They are uncalled for among gentlemen

Dr Simonton says "The only way to have consistency between the Code and the practice of the profession in regard *to patent things in general, is to remove the clause* referring to the same, from the Code" That is precisely the argument used by the liquor dealers of New York in *regard* to Sunday opening of the saloon They say "The Sunday law is not enforced nor obeyed, therefore the law should be repealed, and the saloon legally be opened" Any one can see that that principle applied to law would soon be subversive of all law—expediency, not right, be the governing principle Yield to a wrong, instead of maintaining the right From my point of view, the editorial in the Journal of March 30, "Print the Formula on the Label," covers quite *completely the position of the great* majority of practitioners There can be no *great* objection to *even a proprietary* combination, *if the composition is* fully known It is the name, label or mark, that constitutes the copyright or "patent" The mixture, drug or drugs used can not be tied up for exclusive commercial use There is no law on earth that can prevent a practitioner from using the formula, compounding it himself, *or by pre*scription at his druggist, if he so chooses to do Proprietaries of that kind, if used by practitioners under the copyright name, are so used for *convenience*, and not of *necessity* *The use of* such may possibly be a violation *of the letter of* the Code, but hardly, *I* think, of the spirit Everybody knows that it is the *unknown* quantity that is objected to in special *preparations No man* can intelligently defend the use of a 'secret nostrum" The practitioner has a right to know, and in all cases ought to *know what* his patient is taking It is tough enough on the laity for us to experiment on them, as *we often do*, with *a* known quantity, but to fire into them *only a name*, so *far as* our knowledge goes, is tough on the profession, as well as the laity, and is utterly devoid of science

Dr Simonton draws comparisons between patented surgical instruments and secret nostrums In one sense there is *no comparison The* practitioner *knows* what he has got in an instrument, there is no secrecy, *no going it* blindfold Let me illustrate this whole subject by a few fancy pictures Many years ago I sat looking down on *President* (*then* Professor) Donald Maclean, screwing down an aortic compressor on a patient It was not a very fancy affair, if my recollection serves me correctly He had it made by a black*smith*, and the Doctor had tried it on himself the day before This instrument successfully controlled the *circulation at* and beyond the field of operation Suppose Dr Maclean had used that instrument *then and for all these* years on the quiet, and next May appeared before the American Medical Association, as its honored President, and said 'Gentlemen, years ago I contrived an instrument *that has been* successfully used in my hands for such and such purposes For $10 I will give you the *right to* use it, and explain its merits" Suppose he turned from the surgical to the medical, *and* continued in *this* way "At the same time that I thought out this instrument some one blundered and in consequence a number of students went down with the smallpox I had unusual opportunities *to study out th*e disease and its treatment, and discovered a remarkable remedy I am *having* this put up in convenient form, and you can be supplied at the rate of $1 per ounce, a small sample will be supplied gratis" Fancy Dr E E Montgomery saying "Gentlemen, I also, like the *President, have made* an important discovery, a new operation for the removal of fibroid tumors Any of you who have patients afflicted in that way who will send them to me will receive 10 per cent of the amount charged Operations are private" Fancy our own Dr Hamilton writing an editorial *on* the cause of epilepsy, and winding up with "I have found a most remarkable remedy for this disease, *and* the members of the American Medical Association can have it for $2 per ounce"

I have used *these* names because that sort of thing would be so utterly *foreign* to the nature and the disposition of *these* gentlemen that misconstruction of the picture is impossible Fancy the picture, however, *and then* imagine the result Yet all this would be just as legitimate as an advertisement of an unknown and unknowable remedy in the Association Journal

Dr Simonton speaks of the inconsistency of we sticklers for the Code in taking other medical journals that have the same objectionable advertisements So we do, but we do not take them *for the advertisements*, but in spite of the advertisements We take them on account of valuable reading matter Because a private publisher uses the brains of an able editor to promote the value of his advertising pages is no reason why the brains of the Journal editor, and the wealth of knowledge he succeeds in getting from his con tributors should be used for the same purpose I am safe in saying that every man of us is proud of the scientific and literary ability displayed in the Journal Hence we regard it as a shame that its advertising pages should in any sense lower its character and tone Dr Simonton's tirade on the inconsistency of the membership is exceedingly weak Inconsistency of membership or of followers is no argument for the repeal of a standard of faith The proper thing to do is to lift the erring brother, if possible, to the level of the standard We can not afford to throw down the fence in this respect, it lowers us to the level of a trade, and finally lands us in a position to say to suffering humanity "You are sick, you will die without help, we have the secret of your recovery, pay our price and live If you can not raise the dollars, die" That is the logical outcome of secret proprietary remedies

From the Pennsylvania point of view, it is a question of *right and wrong* In that light, the profession of the Keystone State are not to be moved from their sense of duty, by the calling of names by the gentleman from California The trouble really seems to hinge on the question of finance I think that can be easily removed by all of us "whooping it up" for the Journal and making it pay, minus the objectionable advertisements, by a large subscription list That is a much better way than lowering the columns to the level of the patent medicine almanac No bickering, gentlemen "Let all things be done decently and in order"

S S Towler, M D

Antitoxin.

Philadelphia, April 19, 1895

To the Editor —I have had my attention called to your editorial, in the April 13 issue of our valuable Journal, in which you describe "A Fatal Result following a Hypodermic Injection," Behring's antitoxin being the injected remedy I send you the following notes, trusting that they will be accepted in the spirit in which they are offered The only comment I have to make, is, that had I known the opus number of the antitoxin used in Brooklyn, I should probably have refused the bottle sent to me

Friday, April 4, I was called to see Mrs L S W, aged about 30 Her statement was, that on the previous evening she had gone to the theater and on returning home had felt no particular symptoms other than a stiffness in the throat and general malaise Friday morning she found spots in her throat and at noon had become so depressed as to become alarmed in regard to her condition The temperature was 101 8 5, respirations 22, and pulse weak, thready and 90 There was excessive dysphagia, the face was slightly flushed, the eyes bright and feverish, and the patient exceedingly languid and anxious On examining the throat, I found the velum pendulum palati of a dark purplish red, the anterior and posterior half arches being of the same color, saving a small area on the right posterior half arch, which was covered with a suspicious gray membrane about a quarter of an inch in length, and an eighth of an inch in breadth, easily removed by a dossil of cotton on an applicator The tonsils were apparently normal, the post-pharyngeal wall acutely hyperemic There was no engorgement of the nasal mucous membranes, though there was a rather too free dis charge of a watery character from the nose Patient was at once placed upon the most vigorous measures, as the patch seemed exceedingly suspicious At 6 o'clock in the evening of the same day, the spot on the right posterior half arch had entirely disappeared, but the velum and half arches otherwise presented the same appearance as earlier in the day The patient's face, however, was greatly swollen, hands slightly puffy, and the statement was made that the urine had been very scanty The only change in the treatment made, was the addition of strophanthus and digitalis On the following morning at 8 o'clock there was still no recurrence of the patch on the right side, but there was a patch on the left side exactly simulating that which had disappeared from the right All of the half arches, moreover, were very much more swollen and the velum was slightly edematous, while the injection of the posterior pharyngeal wall seemed rather to be increased At noon, sterilized tubes had been secured and inoculation was made By the kindness of the Polyclinic Hospital Laboratory, the inoculated tube was promptly placed under the most favorable conditions for an early examination The report from the laboratory was made in a little over twenty-four hours and confirmed in every way the opinion first formed, that the case was one of diphtheria In the interval, the area covered by the membrane on the left side rapidly increased, the spot first affected on the right side became again involved, and the membrane there rapidly spread until it completely covered the posterior half arches, which were greatly swollen and thickened, and involved the upper third of the anterior half arches on both sides, while a small patch also appeared upon the velum which was now more edematous To further complicate matters a small circular spot appeared on the posterior pharyngeal wall nearly centrally placed All this in spite of the most active measures taken to combat the disease The patient's general condition fortunately rather improved, the temperature fell to very slightly above normal, the pulse somewhat improving in character, and the action of the kidneys greatly improved

April 8, I obtained through Frank E Morgan, pharmacist of Philadelphia, a white labeled bottle of Behring's antitoxin solution The entire contents of the bottle were promptly injected in the left thigh at its inner aspect and middle third, two punctures being made, antiseptic precautions being taken The patient complained of very little distress, and the fluid was rapidly absorbed The local treatment, as well as the general treatment, was in no way altered The change in the appearance of the half arches at the end of twelve hours was simply astonishing During the late afternoon and evening of the day of the injection, the attendants reported to me that the membranes came away in great masses, and on the morning of April 9, I found nothing but a series of healthy looking ulcerations on the anterior posterior half arches, velum and pharynx Frequency of the local applications as well as their character were greatly changed with the idea of simply encouraging rapid healing of the parts The patient progressed without accident of any kind, and on Friday, April 12, the throat was perfectly clean, and practically normal, barring the slight hyperemia of the velum On Monday April 15, even this slight hyperemia had disappeared and the patient was discharged after having been subjected to a thorough antiseptic bath from head to foot At this time, Dr C P Franklin, who had assisted me in the treatment of the case, called my attention to your Journal, and to the fact that the number on the bottle of Behring's solution corresponded with the number of that used in the Brooklyn case, namely, operation 159

Very sincerely yours, Conrad Berens, M D

Cherokee Strip Fossil

The Remains of an Enormous Extinct Animal Found by a Settler

Humboldt, Allen Co, Kan, April 3, 1895

To the Editor —The fossil skeleton of a huge sea animal was recently discovered by a settler in the Cherokee Strip, while searching for driftwood along the banks of the Arkansas River The beak or bill, was projecting from the sand and on breaking it off, it was found to be bone This aroused the finder's curiosity to the extent that he set to work to exhume the skeleton The beak or bill, a few vertebræ, some ribs and propellers were in a fair state of preservation, but the remainder crumbled as soon as exposed to the air

The discoverer stored his find in a shed, and thought little of its importance By chance, Henry Patterson heard of it, went to the Strip and purchased it, had a wagon with a cushioned platform built, suitable for the safe transportation of the relic of the antediluvian period, and is now realizing a bonanza from his investment, exhibiting it in the cities and towns of southeastern Kansas A description of the remaining bones was sent to the Director of the National Museum at Washington, and the following reply has been received by me

"The matter is one of great interest from a paleontological point of view, and I have taken the liberty of at once submitting your letter to the Director of the Smithsonian Institution, asking him to write you in regard to the matter and send a qualified paleontologist to investigate the discovery, classify or coin a name for it, and obtain it The skeleton you speak of is certainly larger than any on record anywhere in the world and it is highly important that it should be preserved in the National Museum "

It has been named by local scientists *monocerosichthysaurus* and *plesiosaurus* It evidently belongs to neither By comparisons with descriptions, and from recollections of the larger casts of fossil saurians, the head and vertebra belong to neither of them The eye sockets are four feet in diameter, with the supra-orbital notch the same as in the human cranium, with a space of twenty inches between the sockets, making the diameter of the skull nine feet and eight inches, with a small brain cavity comparatively The vertebræ measures twelve inches each way and the distance from tip to tip of the transverse processes is forty inches, and resembles those of a mammal rather than a fish The os hyoides is thirty-eight inches long, a rib thirteen feet eight inches long, circumference thirty-three inches, and two triangular-shaped bones corresponding to right and left, three and one-half by twelve feet, the use of which is conjectured, but supposed to be propellers or fins

Local scientists who have expressed an opinion, and many have examined it, do not pretend to name it and believe it to belong to no recorded species It has been variously estimated to have been from sixty to three hundred feet long I think the latter more nearly correct

Yours truly, R L PATTERSON, M D

Expert Witnesses.

CHICAGO, ILL , April 20, 1895

To the Editor —The following bill is now before the Illinois State Legislature as House Bill 767, and the Committee on Legislation of the State Medical Society asks every member of the profession in the State to assist in its passage by writing at once to his State Senators and Representatives, urging their support of the measure

D W GRAHAM, *Chairman*

A BILL

For an Act to Regulate the Taking of Expert Testimony in Civil and Criminal Proceedings

SECTION 1 —*Be it enacted by the People of the State of Illinois, represented in the General Assembly*, That in any case on a trial in a court of record in this State where expert testimony is to be introduced by both the prosecution and the defense, and also in any other case in the discretion of the court, the presiding judge shall, either of his own motion, or at the request of either party to the suit, subpœna one or more persons who shall be known as court witnesses

SEC 2 —Such court witnesses shall be citizens of the State, of known personal probity, and only such as are recognized in the communities where they reside as having special knowledge and experience pertaining to the subjects upon which they are to testify , and if physicians, they shall have been not less than five years in lawful and active practice

SEC 3 —The presiding court shall fix the fees of such court witness or witnesses but in no case shall the fees allowed such court witness exceed fifty ($50) dollars per day Such witnesses shall be paid in the manner provided by law for other witnesses, except that in criminal cases the fees of such witnesses shall be paid by the county

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Wants it Published

[TELEGRAM]

PHILADELPHIA, PA., April 23, 1895

To the Editor —Philadelphia County Medical Society earnestly requests immediate publication of decision of Judicial Council referred to in Editor's comment on Dr Roberts' letter CHARLES H THOMAS, Chairman

ANSWER —The Chairman was informed that permission would be asked of the Chairman of the Judicial Council to print the decision as requested, and Dr Brown was accordingly asked by the same mail for such permission

ASSOCIATION NEWS

The Quimby Amendment

JERSEY CITY, N J , April 19, 1895

To the Editor —Please find inclosed a letter from Dr Strong (of Colorado) to me, which I would like very much to have you publish in the JOURNAL This letter of Dr Strong's advocates the amendment which I proposed at San Francisco last year You may remember that I offered to amend the Constitution by striking out the words, "Surgical Instruments" in line 2, clause 5, Article 1 These words should never have been placed in the Constitution in their present relation, as they are disjointed and out of harmony with the rest of the Article It causes a severe strain of the imagination to find any logical relation between quack or patent medicines and surgical instruments This amendment I offered last year, I think ought to pass at our coming meeting, as it is in the line of progress of the present age, and in exact justice to the laborer, who is certainly worthy of his hire

I hope, Mr Editor, you will see your way clear to advocate the amendment in our valuable JOURNAL

Yours very truly, I N QUIMBY, M D

April, 1895

Dr I N Quimby,

Dear Sir —Permit an old M D , who has seen two generations of Doctors of Medicine come and go, to express his gratification upon the resolution offered by you at the last meeting of the AMERICAN MEDICAL ASSOCIATION, to so amend the so-called ethical Code of the profession, as to encourage useful surgical inventions, by permitting members of the profession to avail themselves of the protection the government furnishes to the inventor of any novel and useful instrument or appliance I think I speak *auctoritate doctissimi Hippocrati* in what I have to say briefly in support of your proposed amendment to our Code

To those who know my horror of all patent nostrums, of all quacks and quackery, of all self-advertising by medical frauds, I need make no personal defense for my argument To any one who has witnessed the wonderful achievements of the present century in the domain of useful inventions under the protection and stimulus of patent and copyright laws, inventions that have wrought changes in human existence, human progress and human enjoyment upon the earth, more marked and marvelous than the dream of Utopia or than the imagination portrays of the possible enjoyments permitted to the inhabitants of some far distant and favored planet, the fact that there still exists among the musty unwritten statutes of the medical profession, a law in effect prohibiting the granting by the government to any member of that profession any protection, any property right, in an original discovery or invention made by him for the benefit of his fellow-men, however useful to the world, and at whatever sacrifice of time, and by whatever exercise of mental gifts, such a law must seem a strange anachronism—a relic of some past age of ignorance, the age of Savonarola or Galileo, when it was a crime to think, to invent, to make any progress that should endanger the hold of superstition upon the human mind God knows that our profession is a most toilsome, weary, almost slavish vocation—to live to toil to toil to live , to die generally *de bonis non*, trusting our brief and narrow fame to the kindly memory of surviving neighbors, and our families to the tender mercies of the followers of more lucrative callings

Can it be that there is a moral wrong in encouraging members of our profession, gifted with inventive power, to discover new and better instruments and appliances to be used in the profession of surgery? In all the most advanced nations a reward is supposed to be offered for every useful invention This is done by the government protecting the property of the inventor , and this protection is based upon the indisputable moral right of every man to the possession of what he shall create or produce—hence patent and copyright laws Most of the inventions which have added so much to the well being of society are the result of the property protection afforded by the patent law It savors of barbarism to argue that the man who manufactures reapers and steam engines and telegraphs has a better property right than the man who invented them, without which invention they would not be manufactured While it is not possible to know how many of the most useful inventions are the result of the reward thus offered to the discoverer and producer, we do know that in those countries where no such reward is given, through the protection of the government to the inventor, there has been little progress made from the semi-barbarism of the Dark Ages

The arguments against giving to the inventors in surgery the protection guaranteed to all other novel and useful inventions, rests upon what might be called a moral theory, which is expressed by saying that it is immoral for a surgeon to accept the reward that all other inventors receive If so, then it is immoral for the government to create and protect property-rights in inventions, the purpose of which is to relieve physical suffering, while it is in every way proper and commendable that the government should protect the property-right in a locomotive, an incubator or a mouse trap This conception of the distinction between these two classes of inventions and inventors rests upon the supposed deteriorating influence the giving of such property-right would have upon the character of the inventor, and upon the *morâle* of the medical profession—for I insist that my assumption is logical, that if by reason of its bad influence upon the profession, of rewarding the surgeon who by long study, experiment and expense, does invent a successful instrument, he should not be permitted to accept any compensation for his time, labor and expense, then it is wrong for the government to offer such a compensation It has never been contended that such a reward has had a deteriorating or in any way baneful influence upon the character of the great inventors in the field of the useful arts and in the scientific and literary vocations In the half century most productive of such inventions, beginning with Morse and coming down to Bell and Edison, it has never been contended that they or Tennyson and Browning and Longfellow and Emerson and Froude and Bancroft and Macauley and Spencer and a hundred others, venerable, lovable, adored by all good men, and who have done much to elevate and sweeten human life, did anything immoral or anything that cast the thinnest cloud, the adumbration of a shadow upon their glorious lives and their eternal fame by accepting the reward given by the government in the property-right it guaranteed them, in the divine creations they gave to world Except for that reward, most of the best things in all our literature would have no existence, for these men lived by their pen Longfellow resigned his professorship at Harvard that he might give us "Evangeline", Emerson left the old church in Boston, where his unremembered ancestors preached, that he might give us "The Conduct of Life", Spencer quit the office of an engineer that he might think and evolve and write Macauley relinquished a government salary that he might give to posterity his great prose epic of the Stuart dynasty Except they had assurance that their country would protect her most worthy citizens against a piracy less honorable than Algerine, there had been no "Evangeline," no "Conduct of Life," no Macauley's "History of England" If there be one field where, above all others, every possible encouragement should be offered by the government and the profession to the devotion of the most intelligent and able minds in the discovery of health-saving, pain-saving appliances, that field is surgery It is but a remnant of an old and abandoned ethical theory that there can be morally no *contract* entered into by a professional man that his services shall be paid for, and that the *honorarium* must ever be his entire dependence We have come upon a practical age, a common sense age, of which one important postulate in its moral code is that every man shall be entitled to just compensation for his services to mankind in whatever field he shall choose to labor Wishing you all success, I am yours truly,

H Strong, M D

To the Medical Profession

At the meeting of the American Medical Association, held in the city of Washington, in 1884, it was a matter of remark that among the numerous statues of eminent men of National reputation at the National Capital, there was none of any representative of the medical profession, and the suggestion that in Dr Benjamin Rush there was a man so conspicuously identified with the period of the Revolution as to make him especially entitled to this distinction, was enthusiastically received and a committee appointed by the President, Dr Austin Flint, to undertake the collection of the necessary funds For various reasons, chiefly the difficulty of appealing directly to the widely distributed members of the profession, the enterprise has made slow progress, and statues to men who did not have Rush's pre-eminent claim as a founder of the Republic have been successfully completed by bodies of comparatively very much smaller membership

The most imposing statues of military heroes at the Capital have cost from $20,000 to $50,000, and having in mind the great services rendered by Dr Rush to his country, the dignity and paramount position among learned bodies of our profession which is to be honored through him, and the many thousands of the intelligent and cultivated citizens of the community who fill its ranks, at least this minimum sum should be collected for the procurement of a fitting memorial Fifty cents from every member of the profession would suffice to erect the most imposing statue at the Capital, but allowing for the assumed indifference of one entire half of the profession, the committee hoped that subscriptions of $1 would have been spontaneously and speedily tendered In this they have been disappointed, and it must now be a matter of pride and duty with every member of the profession not only to contribute but to assist actively in inducing his colleagues, friends and acquaintances to forward to the committee without further delay, as much as they are able, bearing in mind that this statue is not merely to Benjamin Rush, Doctor in Medicine, however successful as a practitioner, accomplished as a teacher, able as a professor, eloquent as an orator, elegant as a writer, profound as a thinker, exemplary as a citizen, and eminent as alienist, sanitarian and social reformer, but to the "Father of Scientific Medicine in America," and "the most distinguished physician this country has ever produced" Member of the Continental Congress, signer of the Declaration of Independence, member of the convention which framed the Constitution of the United States, and first Surgeon General and Physician General of the Army of the Revolution Eighty-two years after his death from the epidemic of typhus he was combating, his fame is as resplendent as during the half century of his life, when he was so conspicuous a figure in our national history No similar train of circumstances has since arisen, nor probably can ever again arise, to enable any other man, however gifted, to acquire the distinction that has made his memory a sacred trust with every medical man of this day and of the future Let us all, therefore, earnestly unite in fulfilling the obligations of that trust The Committee

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Section on Surgery—**Preliminary Program**—Joseph Ransohoff, Cincinnati, Chairman, R H Sayre, New York, Secretary

Tuesday Afternoon, May 7

1 Address of Chairman, Joseph Ransohoff, Cincinnati Ohio

2 Cystoscopy, Catheterization of the Ureters and Catheterization of the Kidneys in the Female, by Howard A Kelly, Baltimore, Md

3 Aëro-Urethroscopy with the Exhibition of a new Instrument, by W K Otis, New York, N Y

4 The Value of Urethroscopy in Chronic Urethritis with demonstration of the Nitze-Oberlander, Casper, and Posner Urethroscopes and other Urethral Instruments, by Ferd C Valentine, New York, N Y

5 Movable Kidney, by Homer Gage, Worcester, Mass

6 Movable Kidney, by W E B Davis, Birmingham, Ala

7 The Radical Cure of Hydrocele, by D C Hawley, Burlington, Vt

Wednesday Morning, May 8

8 Appendicitis, by John B Deaver, Philadelphia, Pa

9 Atypical Cases of Appendicitis, by J B Emmert, Atlantic, Iowa

10 Report of One Hundred Cases of Appendicitis, by S F Forbes, Toledo, Ohio

11 Paper, by J McFadden Gaston, Atlanta, Ga

12 What Advance has been made in the Surgical Treatment of Hernia, by W B DeGarmo, New York, N Y

Wednesday Afternoon, May 8

13 The Treatment of Malignant Tumors by the Toxins of the Streptococcus of Erysipelas, by Nicholas Senn, Chicago, Ill

14 Tumors of the Mammary Gland, by W L Rodman, Louisville, Ky

15 Foreign Bodies in the Esophagus, and a Report of five Esophageal Tumors by A Vander Veer, Albany, N Y

16 Is Total Extirpation of the Rectum ever Justified, by J M Matthews, Louisville, Ky

17 Colotomy vs Extirpation in Cases of Cancer of the Rectum by L H Adler, Philadelphia, Pa

18 Branchiogenous Carcinoma, by Charles A Powers, Denver, Colo

19 An Original Osteoplastic Operation for the Removal of the large vascular Tumors growing in the Vault of the Naso Pharynx, Antrum of Highmore, Spheno Maxillary, and Pterygo-Maxillary Fissures, with presentation of Patient, by John A Wyeth, New York, N Y

20 Electrolysis in the Treatment of Sacculated Aneurysm, through Introduced Wire, with Report of a Successful Case, by D D Stewart, Philadelphia Pa

THURSDAY MORNING, MAY 9

21 Scientific Uses of the Surgical Flap, by George Wiley Broome St Louis, Mo

22 Effects of the New Bullet, by T D Griffiths, Kansas City, Mo

23 Asepsis in Private Practice, by Carl Beck, New York, N Y

24 The Surgical Technique of Aseptic Wounds, by Henry O Marcy, Boston, Mass

25 Flat-Foot—Supra malleolar Osteotomy with Report of a Case—Photographs and Specimens of Feet of Man, Orang, Baboon Chimpanzee and Gorilla, by B Merrill Rickets Cincinnati, Ohio

THURSDAY AFTERNOON, MAY 9

26 Diagnosis and Treatment of Tumors of the Brain, with a Report of Seven Cases by Emory Lanphear, St Louis, Mo

27 Presentation of a Case of Microcephalus Treated by Extensive Craniotomies, by Ernest Laplace, Philadelphia Pa

28 Gall Stones in the Common Duct and their Surgical Treatment, with remarks on the ball valve action of floating Choledochus Stones by Christian Fenger Chicago, Ill

29 Skin Grafting after the Method of Thiersch, by J C Oliver Cincinnati, Ohio

30 Hypertrophy of the Thyroid Gland, an Experimental Study by Wm S Halstead Baltimore, Md

FRIDAY MORNING, MAY 10

31 A Confusion of Important Terms and some of the Consequences by R Harvey Reed, Mansfield Ohio

32 Excision, Erosion and Amputation in Joint Disease, by De Forrest Willard, Philadelphia Pa

33 Exsection of the Knee Joint with Report of a Case of complete Dislocation of the Knee, of nine years' standing, and with especial Reference to Methods of Fixation, by S F Forbes Toledo Ohio

34 The Relative Frequency of Joint Tuberculosis, by——

FRIDAY AFTERNOON, MAY 10

35 The New Surgical Splinting—Report of Cases Exemplifying it, by E A Tracey Boston Mass

36 A Simple Method of Dressing Fractures of the Extremities auxiliary to the Bandage, by John E Link, Terre Haute, Ind

37 Deformities following Fractures of the Shafts of Bones, by Thomas H Manley, New York, N Y

Section on Laryngology and Otology —J F Fulton, St Paul, Minn, Chairman, Thos J Gallaher, Pittsburg, Pa, Secretary, Executive Committee E Fletcher Ingals, Chicago, Ill, E L Shurley, Detroit, Mich, J E Boylan, Cincinnati, Ohio

TUESDAY AFTERNOON, MAY 7

1 Address of Chairman, John F Fulton St Paul Minn

2 Electrolysis in Treatment of Intra and Post Nasal Fibroid Tumors, by J F Schadle, St Paul, Minn

3 Deflection of the Nasal Septum, by Eugene S Talbot, Chicago, Ill

4 Electro-vibratory Massage of the Turbinated Tissue, by J Mount Bleyer, New York, N Y

WEDNESDAY MORNING, MAY 8

5 Electrolysis by a Current Controller for the Reduction of Spurs of the Nasal Septum, by W E Casselberry, Chicago Ill

6 The Vaselin Spray producer vs Surgical Means as a Successful Treatment of Nasal Inflammation, by Thos F Rumbold, San Francisco, Cal

7 Carcinoma of Larynx, with Report of Case, by Norval H Pierce, Chicago, Ill

8 The Bleeding Polypus of the Nasal Septum, by W Freudenthal, New York, N Y

9 A Case of Congenital Mucous Polypus of the Nose, with Remarks, by Dunbar Roy, Atlanta, Ga

10 History of a Case of Recurrent Nasal Fibroma, by Price Brown, Toronto, Can

WEDNESDAY AFTERNOON, MAY 8

11 Operative Treatment of Purulent Disease of the Antrum of Highmore, with Exhibition of New Instruments, by Walter J Freeman, Philadelphia, Pa

12 Report of a Case of Caries of the Sphenoid Bone, with Specimen, by Ewing W Day, Pittsburg, Pa

13 Further Observations on the Sub mucous Injection of Creasote in Laryngeal Tuberculosis, by Walter F Chappell, New York, N Y

14 Proper Climate for the Treatment of Consumption with Laryngeal Tubercular Lesions, by John N MacKenzie, Baltimore, Md

THURSDAY MORNING, MAY 9

15 (*a*) Breathal Bands, with Demonstration in Situ Naturale, (*b*) Relations of Food to Laryngology, by E Cutter, New York, N Y

16 Laryngology as a Diagnostic Factor in Gynecology, by Carl Seiler, Philadelphia, Pa

17 Notes on Several Cases of Laryngeal Neuroses, by S K Merrick Baltimore, Md

18 A Case of Recurrent Fever of Two Years Duration, Cured by the Removal of a Rhinolith, Chemic Analysis of Rhinolith and Nucleus, by W Sheppegrell, New Orleans, La

19 New Septum Forceps, by A J Erwin, Mansfield, Ohio

THURSDAY AFTERNOON, MAY 9

20 Excision of the Membrana Tympani, Malleus and Incus, in Chronic Purulent Otorrhea, by Chas H Burnett, Philadelphia, Pa

21 Preventable Deafness and its Influence on Career, by Jas G H Nichols New York, N Y

22 What are the Curative Effects of Pneumo and Phono-Massage on the Middle and Internal Ear, by Louis J Lautenbach Philadelphia, Pa

23 What the Patient Expects and What We Can Do in Chronic Catarrh of the Tympanum or Middle Ear, with Deafness, by Lawrence Turnbull, Philadelphia, Pa

(Discussion to be opened by Dr H V Würdemann, Milwaukee Wis)

24 Fibrino-plastic Exudates, Etiology and Pathology, with Report of two Cases, including Laboratory Investigation, by D Braden Kyle, Philadelphia, Pa

25 A Further Contribution to the Subject of Middle Ear Operations, by S MacCuen Smith Philadelphia, Pa

26 The Importance of Aural Anatomy in Routine Clinical Practice, illustrated with Stereopticon, by B Alexander Randall, Philadelphia, Pa

27 Behold, 'They Tinker," by J G Carpenter, Stanford Ky

28 The Surgical Treatment of Chronic Suppurating Otitis Media, by J H Bryan, Washington, D C

FRIDAY MORNING, MAY 10

29 The Upper Tone Limit in the Normal and Diseased Ear, as Determined by the Galton Whistle, by H A Alderton, Brooklyn, N Y

30 The Causes of Halitosis or Fetid Breath, by Wm T Cathell, Baltimore, Md

31 Venous Cavernosa of the Nasal Mucous Membrane, by F E Boylan New York, N Y

32 A Double Pediculated Naso Pharyngeal Myxo Fibroma, by C W Richardson, Washington, D C

SOCIETY NEWS.

Rocky Mountain Medical Association —The surviving members of this Association will meet as the guests of Dr John Morris, Secretary and Treasurer, at the Athenæum Club, Baltimore, on Tuesday evening, May 7, at 6 30 o'clock, P M

Association of Acting Assistant Surgeons of the U S Army —A special meeting will be held in Baltimore, Md May 8, during the coming session of the AMERICAN MEDICAL ASSOCIATION It is earnestly desired that every member of the Association will make an effort to be present, to consider matters of importance By direction of the President

W THORNTON PARKER, M D, Recorder, A A.A.S
Groveland, Mass

BOOK NOTICES

Twentieth Century Practice An International Encyclopedia of Modern Medical Science By leading authorities of Europe and America Edited by Thomas L Stedman, M D, New York City In Twenty Volumes Volume ii Nutritive Disorders New York William Wood & Company 1895

The contributors to this volume are G S Dujardin-Beaumetz, M D, of Paris,* Sir Dyce Duckworth, M D, etc, of London, Archibald E Garrod, M D, etc, of London, Henry M Lyman, M.D, of Chicago, Thomas J Maclagan, M D, etc, of London, Carl H von Noorden, M D, Frankfort-on-the-Main, Max J Oertel, M D, Munich

The topics are Addison's disease and other diseases of the adrenal bodies, diabetes mellitus, rheumatism, gout, arthritis deformans, diseases of the muscles, and obesity

The work is well done, as may well be imagined from the names mentioned, but now and then there crops out an eccentricity, for instance, it certainly sounds a little queer to read in von Noorden, page 73, where he writes of the syphilitic theory of diabetes "More than that, it may be remembered that diabetes was a disease recognized by Greek and Roman physicians, while syphilis is supposed to have been communicated to Europeans by the Indians, after the discovery of America, as if in revenge for their discovery and annihilation" Sprengel, who gave this question much study (Hist de Med, vol ii, p 499 et seq), asserts that the statement of the American origin of syphilis rests on insufficient proof In the ancient literature of the Chinese and Japanese, in the writings of Moses the lament of David, and particularly in the Book of Job may be found such descriptions of the disease, and there is little question that in some form or another it has existed from the earliest times

The chapter on gout, by Professor Lyman, the only American author in this volume, is complete and interesting Not only is his style pleasant, but there is breadth of treatment and such thorough knowledge of medical literature displayed as to make this section extremely entertaining

The volume, as a whole, is quite equal to its predecessor

Transactions of the Antiseptic Club Reported by Albert Abrams, a member of the San Francisco medical profession New York E B Treat Pp 206

This is an alleged funny book, written by a funny man, who seeks to make sport by poking fun at the doctors It must be confessed that the author sometimes succeeds The doings of the club are set forth with much humor

Charaka Samhita Charaka Samhita, translated into English Published by Avinash Chandra Kaviratna Published at 200 Cornwallis Street, Calcutta

This is the twelfth fasciculus of the series, the appearance of which we have from time to time chronicled This fasciculus, which is not less interesting than its predecessors, touches on the very practical topics of wine, water and milk The student of medical history must receive this book with the keenest interest The views of the ancient Hindus on water and milk will be read with pleasure

NECROLOGY

Gustavus Frauenstein, M D, of New York City, died Feb 27, 1895 He was an alumnus of the College of Physicians and Surgeons, New York, class of 1868, and a member of the Academy of Medicine, of the County Medical Association, and of the Medico-Legal Society

Austin Samuel Clutterbuck M D, died March 28, 1895, at the Memorial Hospital of Morristown, N J He was a native of County Tipperary, Ireland, born there Sept 15, 1864 He came to this country about five years since His wife was a Dublin lady, Miss Mary Cashin, to whom he was married in Dublin in 1892 He was a licentiate of the Royal College of Surgeons, Ireland, in 1886

Moses D Van Pelt, M D, of New York City, died April 18 He was a graduate of the New York University, in the class of 1835 Until recently he had been in practice at 348 Willis Avenue, but he was temporarily removed to New London, Conn, where death took place suddenly in the eighty-seventh year of his age He was a member of the Academy of Medicine, the Society for Widows and Orphans of Medical Men, and other organizations His funeral took place April 16

William Hunter Birckhead, M D, of Newport, R I, died Friday, April 12, aged 56 years He was the son of James and Eliza Hunter Birckhead, and allied to several old Rhode Island families He graduated in arts at Trinity College in 1861, and in medicine from the New York College of Physicians and Surgeons in 1864 He became a member of the resident staff of Bellevue Hospital directly after graduation This was under competitive examination, and at a time when typhus fever was cutting down interne after interne He passed through his service with credit and advantage, serving chiefly in the First Medical Division He was interne at the New York Woman's State Hospital, from 1866 to 1868 In the latter year he became attending physician at the Children's Hospital at Newport He went abroad in 1871, and spent several months at the clinics in Paris and Vienna From 1869 to 1879 he served as visiting physician and surgeon at the Newport General Hospital His specialty, as indicated by the line of careful preparatory study, lay in the direction of the diseases of women and children

George Frank Westbrook, M D, of Brooklyn, died April 12, in his forty fifth year He was born in St Louis, Mo, graduated from the Long Island College Hospital, first in honor, in the class of fifty-seven, of which he was the youngest member Five years later he was placed upon the Summer Faculty of that school, teaching anatomy and surgical pathology He held the position of visiting physician to the Methodist Episcopal and to St Mary's Hospitals for a number of years, and was a member of the American Climatological and Laryngological Societies, of the New York Academy of Medicine, and of most of the Brooklyn medical societies He was a frequent contributor to medical literature, and had devised, among other things, a daring method of drawing blood from the overcharged right side of the heart with a fine hollow needle, in otherwise hopeless cases of pneumonia His health broke down four years ago, but he was entirely his vigorous self again for some months last summer, at the end of his long vacation For the past year he had been writing extensively for a system of therapeutics, and at his death was engaged on a large work on medical diagnosis He was an independent thinker and a close student, and studied his patients as individuals, with a thoroughness few men use His patients were his warm personal friends, and he had the power to develop strong personal affection in his students and colleagues through his kindness, his heartiness and his honesty, as well as a wide faith in his quiet power The cause of his death was pneumonia, the duration of the attack being about four days He leaves a widow and one child

George Cupples, M D, of San Antonio, Texas, April 20 —— E J Lawton, M D of Rome, N Y, April 19, aged 60 —— A C Nixon, M D, of Hanover, Ohio, April 17, aged 72 —— John P Wall, M D, of Tampa, Fla, April 18 —— H W Foster, M D of Pittsburg, April 14, aged 23 —— D L Starr, M D, of Pittsburg, April 13, aged 83

PUBLIC HEALTH

Demography of France —The report of the French Department of Statistics for 1893 has been published in the *Journal Officiel*, from which it appears that there were registered 287,294 marriages, 6,184 divorces, 874,672 births and 867,526 deaths This is a slight improvement over the figures for 1892, being 18 825 more births and 8,362 less deaths, so that in place of a loss of 20,041 inhabitants for the country in 1892 there is a slight net increase of 7,146 While the total number of marriages shows a falling off of 3,025, it is nevertheless, superior to the mean of 280,000 for the decimal period between 1881-90 The increase in the number of marriages—since the large population immediately following the year 1870 71 has arrived at a marriageable age—renders it probable that the low birth rate for the last twenty years, on account of the large number of young men killed in battle, will begin to rise again This seems to be indicated by the increase in 1893 after a three years deficit Although as above stated, the total number of marriages was 3,025 less than in 1892, yet in 28 departments the number of marriages increased The number of marriages corresponds to 7 56 per cent of the population As usual, the mountain departments, which furnish the most adult emigrants, have the smallest number of marriages—5 6 in the Lower Pyrenees, 6 in the Upper Pyrenees, 6 3 in Corsica and Savoy, etc The largest proportion, 9 3 per cent, is in the Seine department The divorces which numbered 5,772 in 1892, increased to 6,184 in 1893 The northern departments and Paris had the largest number—110 and 171 respectively per 100 000 families Births which had been lowered since 1890, increased by 1882 5 with a total of 874 672, of which 446,957 were boys and 427,715 girls It may be stated that the increase was general for it prevailed in 71 departments and only decreased in 16 The general birth rate was 22 9 per 1,000 varying from 14 9 in Gers to 33 5 in Finisterre Natural births increased in 1893 to 76 562—the highest ever observed, being a proportion of 8 8 per 100 These were most frequent in the departments in the north and northwest, in the Seine department the proportion was 24 3 per 100 Deaths amounted to 867,256, of which number 449,682 were men and 417,844 women, the rate being 22 8 per 1 000 While the mortality in 1893 was 8,362 less than the year preceding, it is still too high The mortality in France rules the increase or diminution of the population, and the attention of municipalities and hygienists should be directed toward it, especially in the first years of life [1]

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* Deceased

"Kissing the Book."—The Legislature of Pennsylvania has decreed that the oath on the Bible shall be dispensed with The Governor of the State has indicated that he will approve of the enactments to that end While it has always been at the option of the swearing citizen to 'affirm" or to take the oath, the average person has not known of this alternative, and has done as directed when told to ' kiss the book " This latter has the tradition and awe of the ages of court procedures behind it, but the multitude can not fail to recognize the change as a modern reform The silent work of the theory of the germ production of disease has undermined the time honored process that has been winked at and tacitly continued by the police and other magistrates These latter are not all of them 'posted" on the properties of a kiss moistened leather covered book to hold and to propagate the bacilli of disease, and the presumption is that not a few of the Pennsylvania Dogberries will regard the amending act as a blow against the defenses of justice To such, no doubt the removal from their desks of the dirty greasy Bible will appear as a misfortune and an ill advised innovation To our bacteriologists and sanitarians, however, it will stand as a mile post on the road of progress

Diphtheria Antitoxin —A circular of the Massachusetts State Board of Health

The investigations of Behring and Roux with reference to the value of serum therapy in the treatment of diphtheria, and the later experience of its use in diminishing the mortality from this disease, are widely known and fully understood The State Board of Health, in accordance with its organic purpose as defined in the statutes, having in view the 'interests of health and life among the citizens of the Commonwealth," and recognizing the value to the people of any agent which will measurably prevent the ravages of a disease capable of destroying more than a thousand of lives annually in Massachusetts, and of causing suffering which can not be expressed numerically, has in this State prepared a supply of antitoxin, for the benefit, primarily, of such communities as find it difficult or impracticable, for any reason, to supply themselves with the new agent from reliable sources Great care has been exercised, in the preparation of this supply, to fulfill the most exacting technical requirements for obtaining a pure and trustworthy product, and the tests of its strength have shown satisfactory results The board does not propose to offer it for sale, but its gratuitous distribution will be under strict conditions designed to prevent abuse and waste and to obtain the most beneficial fruits Each bottle is marked with a number and the date of the preparation of its contents No antitoxin will be issued except upon a pledge that a full statement of the observed effects of its use will be returned to the board at the termination of the case In all cases possible, a bacterial diagnosis will be insisted upon The board desires to emphasize the importance of using such appliances only as are adapted to the proper administration of the remedy, of remembering that experience has demonstrated that antitoxin is most useful in the earliest stages of a diphtheritic attack, and of realizing that trained medical skill is required to administer it successfully A blank form for the report and a detailed statement of instructions as to methods will accompany each bottle of the antitoxin serum For the needs of persons living within twenty five miles of Boston, it will be required, for the present, that personal application at the office of the board shall be made by the attending physician in the diphtheria case, or by some person authorized by him For the convenience of more distant parts of the State local agencies at public hospitals or municipal health offices will probably be established by the board in accessible centers The office of the board (Room 141, State House Extension), is open each week day, except Saturday, from 9 A M to 5 P M, and on Saturday from 9 A M to 2 P M

Samuel W Abbott, Secretary
State House, Boston, March 25, 1895

Health Reports —Sanitary reports to the Supervising Surgeon-General Marine Hospital Service

SMALLPOX—UNITED STATES

Iowa Des Moines, April 17, 1 case

Missouri St Louis, April 6 to 13, 21 cases and 2 deaths

Ohio Cincinnati, March 28 to April 18, 31 cases and 2 deaths, Cleveland, April 6 to 13, 1 case, Coal City, March 28 to April 18, 1 case (Removed to hospital at Cincinnati), Columbus, April 13 to 20, 1 case, Wellington, March 28 to April 13, 2 cases

Pennsylvania Chester April 13 to 20, 1 case of varioloid, Philadelphia, April 6 to 13, 11 cases

SMALLPOX—FOREIGN

Argentine Republic Buenos Ayres, January 1 to 31, 7 deaths

England Birmingham, March 31 to April 6, 1 case, Derby, March 31 to April 6 1 death, Liverpool, March 31 to April 6, 3 cases, London, March 31 to April 6, 53 cases

Germany Prague, March 23 to 30, 2 cases

Gibraltar April 1 to 7, 2 cases

Holland Amsterdam, March 31 to April 6, 1 case, 1 death, Rotterdam March 31 to April 6 3 cases, 2 deaths

Mexico Nogales, April 6 to 13, 2 cases, 2 deaths

Russia Batoum, March 26 to April 2, 10 cases, 2 deaths, Odessa, March 23 to 30, 3 cases 2 deaths, St Petersburg, March 23 to 30 7 cases, 1 death

Scotland Edinburgh, March 31 to April 6, 8 cases, 1 death, Glasgow March 31 to April 6, 45 cases, 2 deaths

Switzerland Basle, March 16 to 23, 7 cases

YELLOW FEVER—FOREIGN

Italy Bologna, March 31 to April 6, 1 case

Mexico Vera Cruz, April 4 to 11, 1 death

CHOLERA—FOREIGN

Argentine Republic Buenos Ayres, January 1 to 31, 27 deaths

Japan Hiroshima, March 29, 1 case, Moji Naval Station, March 19, 18 cases and 10 deaths March 22, 1 death

Yokohama, Japan March 29 1895

Sir —I have the honor to inclose copies of official dispatches with regard to what appears to have been a slight outbreak of cholera, at the station of Moji, southern Japan The very active measures taken by the Japanese authorities seem to have been successful in stamping out the disease, as no new cases have occurred since the 19th or 20th inst I may say that, in the military and naval posts, not only are the regular quarantine and sanitary laws applied, but they are backed by a specially stringent code administered under the War and Navy Departments The Japanese Government fully recognizes the imminent danger of the importation of disease with returning soldiers, sailors, and above all, through the large bodies of coolies which are employed in army transportation, and have taken such measures as seem best adapted to meet the emergency

The danger is, undoubtedly, a grave one Cholera is, practically, endemic, in more than one Chinese city all the maladies which so often follow in the train of war and famine are of possible occurrence, and the distance between the

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[1] Bulletin Medical

Chinese and Japanese coasts is covered in but a very few days

I regret to say that already, through the native authorities, I have official information of the appearance of several cases of the plague at Hongkong, within the past week The recurrence of this disease with the advancing spring has been confidently expected by all familiar with the history and laws of this malady, especially in view of the so far, very perfunctory action of the Government of Hongkong * * * * * I am, Sir, Very respectfully,

(Signed) Stuart Eldridge, M D,
Sanitary Inspector, U S M-H S

ENCLOSURES

Fukuoka, March 18

At the town of Moji, Fukuoka Ken, cases of acute vomiting and purging have appeared since the 8th inst, to the number of eighteen, with ten deaths Careful clinical and post-mortem examinations by two able physicians, who declare the disease to be cholera The first case had been in communication with a vessel that came from the China coast

(Signed) Governor of Fukuoka Ken

Fukuoka, March 20

There is no new case since yesterday and disinfection and preventive measures are fully carried out

(Signed) Governor of Fukuoka Ken

Fukuoka, March 21

To day every house has been suspected and disinfected, and there is no new case

(Signed) Arita, Chief of Police, Fukuoka Ken

Fukuoka, March 22

There is no new case since 20th inst One death yesterday, five remain under treatment

(Signed) Arita, Chief of Police, Fukuoka

Hiroshima, March 29

Yesterday cholera attacked a coolie who has worked on the transport ships at Ujina Forty men who had been living with him, and thirty more who had communicated, are isolated and under observation

(Signed) Governor of Hiroshima Ken

MISCELLANY

Change of Address—Dr Jas T Jelks, to 218 Central Avenue, Hot Springs, Ark

The Samaritan Hospital for Women, Montreal, was opened by Her Excellency, the Countess of Aberdeen, Jan 17, 1895

Dr Bayard Holmes—Dr Bayard Holmes has been re appointed as Secretary of the College of Physicians and Surgeons of Chicago

New York Ophthalmic and Aural Institute—This institution has been named in the will of the late Mary Putnam Bull, formerly of Tarrytown, N Y, to receive the sum of $2,000, to be applied to the sustentation account

Professor Schnabel—Dr Stellwag (von Corion) late the Professor of Ophthalmology in the Faculty of Medicine, University of Vienna, has been retired on account of age Dr Schnabel, of Prague has been appointed to the vacancy

Many Indorsements.—The Chicago Medical Society, the Chicago Gynecological Society and the Chicago Academy of Medicine have passed resolutions requesting Mayor Swift to retain Dr A R Reynolds as Health Commissioner of Chicago The judgment of the Journal as expressed last week on this subject is thus seen to be the voice of the whole profession Will the Mayor heed it?

The Code Question—The Code question will not down The premature publication of a hasty resolution passed at a poorly attended meeting of the Cleveland Medical Society has resulted in a renewal of the agitation of this subject throughout the medical press in such a way that it will force itself upon the attention of the American Medical Association meeting at Baltimore It is to be hoped that this question will soon be settled, so that the valuable time of the Association may be better occupied in the discussion of scientific papers—*Cleveland Medical Gazette*

The Royal College of Physicians—The Royal College of Ph
sicians of London held an extraordinary comitia for t
purpose of electing a President Sir J Russell Reynol
was re-elected In his annual address, President Reynol
stated that "the committee appointed to carry out the d
cennial revision of the nomenclature of diseases had prac
cally completed their labors, had passed the volume in pro
a few days since, and it was about to be issued by the Quee
printers"

Vermiform Appendix in Hernias—Kraft reports seven cas
of hernia, in three of which the appendix alone was hern
ted, in the other four there was a loss of intestine in additic
After searching the literature and comparing his cases t
author concludes that if the appendix is neither perforat
or gangrenous it is to be reduced, in case of perforation
gangrene, resection of the appendix is indicated The inte
tine if present in the hernia, whether gangrenous or not,
to be uncovered for inspection, as in all cases of gangreno
intestinal hernias[1]

Instance of Longevity—I was born in 1793, and since the
have never been ill a single minute," is the statement of I
de Bossy, the oldest of French physicians, who is still
active practice at Havre He has never followed any spec
diet, and is opposed to anything of the sort He rises at
summer and winter, and as soon as he is dressed starts
his rounds, usually on foot He has drank coffee all his li
has no objection to a glass of bitters, and tobacco is '
poison which he regularly absorbs" He attributes
longevity to moderation in all things His father lived
be 108 Dr de Bossy took his degree in 1818, then went
England, and later to India, where he practiced medici
and returned to Havre, where he has since been at wo
sixty-four years ago He has two sons, the elder 68 years o
—*Tribune*

Legislation for the Prevention of Blindness in Missouri—Se
eral weeks ago a bill was introduced into each house of t
Missouri Legislature, which contains in substance the sa
provisions as already exist in the laws relating to this su
ject in New York, Maine, Rhode Island, Minnesota, Ohio a
Maryland In Missouri the bill has passed both houses wi
little or no opposition, but still awaits the signature of t
Governor It would be a real misfortune to the State if
failed to adopt the advanced policy which has actuated la
makers in so many States already, and is interesting t
more intelligent leaders in still other parts of the Uni
The Committee of the American Medical Association w
make its report at the meeting in May, and we surely ho
that the Governor of Missouri will not deprive his State
the privilege of being counted among those adopting th
enlightened policy of the prevention of blindness from op
thalmia neonatorum

Treatment of Strangulated Hernias—Chalita has in the l
eight years treated ninety cases of strangulated hernia
the Jewish Hospital at Kieff If the general state of t
patient is good, taxis should be tried under narcosis
was successful in thirty-three cases after the strangulati
had lasted from one to five days If symptoms of peritoni
or collapse are present, immediate operation is necessa
The exact method to be used varies with the case T
author performed twenty herniotomies with 15 per ce
mortality, twenty-nine operations on hernias already ga
grenous with resection of the intestine had 3 per cent
deaths, three intestinal fistulas were successfully treat
by the enterotome and one stercoral fistula was sutur
Herniotomy was followed in seven cases by the radical o
ration which is always indicated according to this autho
the intestine is healthy[2]

New Hemostatic—Hederich recommends a new hemosta
ferripyrin This substance is a definite combination
perchlorid of iron and of antipyrin in the form of a reddi
orange powder, readily soluble in cold water It has so
appreciable advantages over the perchlorid It is

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[1] Nord Med Arkiv

[2] Rev Int de Med et Chir Prat

caustic nor unpleasant to the taste and its hemostatic properties are superior to the perchlorid alone In a case of abundant hemorrhage from a very vascular nasal myxoma, two tampons saturated with a 20 per cent solution of ferripyrin arrested the hemorrhage completely It may also be used internally in doses of 0 gr 50 According to the author it should be tried in 5 or 1 per cent solution in gonorrhea [1]

Wounds of the Palmar Arches —Amitine says that hemorrhages from the palm of the hand are often grave and rebellious Out of 150 cases collected by the author from literature, 6 died, 40 lost the power of working, 7 suffered amputation and 137 times there were grave secondary hemorrhages Local compression, according to Reden's method is not certain, and the author concludes that the only method guaranteeing absolute hemostasis is the old method of Antyllus—ligation of the two ends in the wound If the tissues are infiltrated it is necessary, as recommended by Professor Kock, to expose the vessel in order to apply the ligature to healthy vessel walls Kock in similar cases has ligated the arches in the region of the thenar eminence and at the level of the pisiform bone [2]

The Best Illustrative Saying Regarding Sea sickness on Record. —Bishop Potter, of New York, is said to be the sponsor for the following narrative, which so far as we can now remember may be accounted as the equal of any like illustration that has ever been published in regard to *mal de mer*, it is taken from the *Monitor* "A gentleman on the deck of an Atlantic liner approached a lady who was lying on a bench in an evident state of abject misery, and asked her 'Can't I do something for you?' 'No' was the spiritless groan 'Can't I get you something to eat?' 'No,' was breathed half inarticulately 'Can't I get you something to drink?' 'No,' with a faint sigh 'Well then, can't I do something for your husband?' pointing to a gentleman stretched along the same bench with his head in her lap She roused her last bit of energy enough to gasp out feebly 'He is not my husband, I do not know who he is'"

Muscular Abscesses in Typhoid Fever —Someil (*These Paris*) concludes 1, abscess in the muscles appearing in convalescence from typhoid fever or as a sequela is a rare complication but is not a manifestation of pyemia, 2 it is due to that alteration of the muscular fiber described by Zenker—trophic changes in some cases, inflammatory in others—which promotes rupture and hemorrhage, and the hemorrhage may occur without rupture and be caused by an arterial embolus, by arteritis or even by vaso dilator complications, 3 the abscess then appears In a case cited it was due to Eberth's bacillus associated with the staphylococcus albus The abscess should always be opened and the foyer which may become the source of new infection thoroughly cleansed

Medical Legislation in Minnesota —The Legislature just adjourned has dealt generously with the medical profession of this State The Medical Department of the State University received $40,000 for a laboratory building, making a total of $150,000 appropriated for buildings alone in a period of four years The medical law was likewise amended, to require of all graduates of later date than 1898, "attendance upon four courses of medical lectures, in different years, of not less than six months' duration each" The provisions of this amendment will therefore exclude from practice in Minnesota, alumni of all schools, matriculating students the coming session, under the provisions of the three years' curricula The minimum provisions of the old act required attendance upon "three courses of six months' duration each"

Partial Prostatectomy in Hypertrophied Prostate —Pousson, of Bordeaux, says that various operative measures are used for the relief of the hypertrophied prostate—total or partial extirpation of the projecting lobes or castration, etc He reports two cases of partial prostatectomy in order to show its value The indications for the operation are limited, for hypertrophy of the prostate often plays but a secondary rôle in the causation of disordered micturition, which seems generally due to sclerosis of the bladder wall Histologic examination, pathogeny and clinical experience demonstrate the diffuse lesions of the urinary passage in prostatics, and the secondary enfeeblement or even abolishment of the vesical contractility In one of the author's cases the flow of urine was no better after the operation and the patient had still to be catheterized The author's observations show that operating will not always remedy disordered micturition when this is developed before the operation, for one patient died on the third day of urinary complications The cases described show the ease with which the operation can be executed and the little danger from hemorrhage, even when operated on in the congestive phase [1]

Still "Scrapping"—*It is an open secret that certain mem*bers of the medical profession, a large majority of whom live in the East, have for years been hostile to the American Medical Association and its Journal There is scarcely a year they do not bob up, like Banquo's ghost, with something new to raise a disturbance about, or rehash some old contention that has been previously defeated

In the *Philadelphia Polyclinic* of March 30, we note that these gentlemen are now greatly exercised over the character of the advertisements admitted in the Journal of the Association

In this connection, the Philadelphia County Medical Society has passed certain resolutions in reference to the matter It seems to us it is time for these gentlemen to understand, if they do not already understand it, that a medical journal, or any other journal, requires two prime factors for its success

1 A solid financial basis

2 A good editor, supported with plenty of scientific contributions

The advertising columns of a journal are for the purpose of raising the finances with which to conduct, and improve if necessary, the literary department Do these gentlemen suppose for a moment that the subscriptions to the Journal of the American Medical Association would support it and conduct it properly without these advertisements? Do they suppose for a moment that the Editor, or members of the American Medical Association, are to be held responsible for what is advertised in its columns? Are they willing to put up the money necessary to run a journal of this character as it should be run, and exclude these advertisements? In our opinion, the Editor and Board of Trustees should be held responsible for the character of that which enters the scientific department, and should be given the privilege of selling their advertising space for the highest price they can procure from any responsible buyer (excepting quacks), with the distinct understanding that neither the Editor, the Trustees nor the Association shall be responsible for what is advertised, beyond the collection of the amount necessary to pay for the advertisement

The *British Medical Journal* is perhaps the most successful medical journal in the world, and why? Because it has a large and paying advertising patronage, in addition to a large subscription list We have before us their March 25 issue, and we find it contains seventy two pages of advertisements and fifty six pages of reading matter In these seventy-two pages of advertisements we find all manner and classes of proprietary medicine represented, from 'Stower's Lime Juice" to 'Bishop's Effervescent Preparations," from "Humanized Milk," to 'Vinolia Soap," and from "Huxley's Improved Patent Trusses" to 'Cactina Pillets"

If the ideas of these gentlemen are carried out, the income of the Journal will be greatly interfered with, and we are quite sure if they are called upon to make up the deficiency that they will be among the first to condemn the Trustees and Editor for incompetency in the financial management of the Journal, and the last to put their hands in their pockets and pay their pro rata of the shortage

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[1] Jour de Med de Paris

[2] Jour de Med et Chir Prat.

[1] Rev Int Med et Chir

We believe in conducting the Journal on strictly business principles, and in making its scientific department equal to that of any journal published in the world In order to do this, however, you must give your Trustees the privilege of conducting its finances in a business-like manner, and your Editor the power to use to the best advantage for the improvement of its scientific department such appropriations as may be assigned him by the Board of Trustees —*Columbus Medical Journal*

Society Notes

At the annual meeting of the Northwestern Wisconsin Medical Association held at Stevens' Point, the following officers were elected President, W N Daniels, Mosinee, Vice-President, D L Sauerhering, Wausau, Secretary and Treasurer, F R Zeit, Medford ——The Hartford County Medical Society held a regular meeting in Hartford, Conn, April 17

Philadelphia Notes

The Philadelphia Medical Club gave a reception to Prof J M DaCosta, on April 26, at the Hotel Bellevue, which was so largely attended as to be of the nature of an ovation Professor DaCosta has fully regained his health, after several months illness, and expects to sail for Europe in June

The Semi-Annual Conversational Meeting of the Philadelphia Pathological Society was held April 25, when Professor George Dock of the University of Michigan, by invitation, delivered an address on "Trichomonas as a Parasite of Man" As the guest of the Society, Professor Dock was tendered a reception at the University Club after the lecture

Hospital Notes

The county hospital which burned at Arville, N Dak, some time ago will be rebuilt during the summer at a cost not to exceed $7,000 The location will be changed to Grand Forks, N Dak

Louisville Notes

The State Board of Health held its annual meeting in the parlors of the Galt House on the 16th inst, with the following members present J M Mathews, President, J N McCormack, Secretary, Wm Bailey, Arch-Dixon, Beeler and McReynolds The President submitted his yearly report, in which he made several suggestions for the consideration of the board The efficiency of the Health Department of Louisville was commended, and he deplored the fact that it was impossible to obtain the passage of an ordinance by the city council in reference to the reporting of diphtheria and other contagious diseases and the proper placarding of houses containing them He solicited the support of the board in the establishment of a Department of Public Health by the Government He paid a tribute to Dr Wm Bailey, one of their number who is President of the American Public Health Association He recommended the passage of a similar law to that recently passed in Iowa, regulating the sale of patent medicines, and requiring that the formula be placed on every bottle, and condemned the practice so prevalent of child insurance

The Secretary's report was read and received It was resolved to appoint a bacteriologist for the State, whose duties will be especially to examine material taken from suspected diphtheritic throats Tubes similar to those used in New York city will be used and furnished free by the board A reliable supply of antitoxin serum will also be obtained and furnished physicians of the State at the lowest possible cost

Dr J L Long submitted a report of his trip to Princeton, where he found four cases of smallpox and three of varioloid

The Board then granted a certificate to practice to Dr D C Ayers, of McLane County, re-considering their previous action upon the recommendation of their attorney, though done so with reluctance Dr W. S Dixon, of Boyd County, was cited to appear before the board to show why a certificate should be given him Certificates were refused J A Hurst, of Pennington Gap, Va, and G P Tilford, of Hopkins County, after an examination, and the following were given certificates Drs Bullock, Barren County, Kell, Stout, Perry County, Sullivan and Sproul The case of Dr J A Caldwell, of Lexington was heard and a certificate refused him He will appeal his case to the courts

Academy of Medicine —The annual election of officers will be held at the next meeting, the first Monday in May

American Medical Association —Among those who will attend the Baltimore meeting may be mentioned, Dr J M Mathews, W H Wathen, W L Rodman, H H Grant, W Carroll Chapman, L S McMurtry and Dudley S Reynolds

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S. Army, from April 13, 1895 to April 19 1895

Capt Rudolph G Ebert Asst Surgeon, is granted leave of absence for two months, to take effect on being relieved from duty at Ft Huachuca, Ariz

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending April 20, 1895

P A Surgeon G McC Pickrell, detached from U S S "Newark," home, and two months' leave

Asst Surgeon L H Stone, ordered to the U S S "Newark'

P A Surgeon C H T Lowndes, detached from coast survey steamer "Hassler," and to Mare Island Hospital

Asst Surgeon C M De Valin, detached from U S S 'Vesuvius," and *to the U S R S "Vermont"*

Surgeon Howard Smith, retired, leave extended six months, to remain out of the United States

Marine-Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the fifteen days ended April 15, 1895

Surgeon George Purviance, detailed as chairman of retiring board for physical examination of officers of revenue cutter service, April 8, 1895

Surgeon H W Austin detailed as member of retiring board for physical examination of officers of revenue cutter service, April 8, 1895

Surgeon H R Carter, detailed as recorder of retiring board for physical examination of officers of revenue cutter service, April 8, 1895

P A Surgeon A H Glennan, granted leave of absence for three days, April 9, 1895

P A Surgeon J B Stoner, when relieved to proceed to Philadelphia, Pa for duty, April 5 1895

P A Surgeon G M Guiteras, granted leave of absence for six days, April 5 and 8 1895

P A Surgeon J C Perry, to proceed to Portland, Ore, and assume command of Service, April 5, 1895

P A Surgeon J M Eager, to proceed to Gulf Quarantine Station for temporary duty, April 5, 1895

Asst Surgeon W J S Stewart, to proceed to Philadelphia, Pa, for temporary duty, April 9 1895

Asst Surgeon Seaton Norman, *to proceed to Norfolk Va, for temporary* duty, April 9, 1895

Asst Surgeon H S Cumming, to proceed to Boston, Mass, for temporary duty, April 9, 1895

LETTERS RECEIVED

Alden, C H, Washington, D C, Antikamnia Chemical Co St Louis, Mo Ayer, N W & Son, Philadelphia, Pa, Anderson, Willis S Detroit, Mich, Atkinson Wm B, Philadelphia, Pa, Ashmead, A S New York

Barger, Wm T, Hardin, Ohio Berens, Conrad, Philadelphia, Pa

Conner, J J Pana, Ill Cokenower, J W, Des Moines, Iowa, Cokenower, J W, Creston, Iowa, Canfield, Wm B, Baltimore, Md, Cerna, David, Galveston, Tex

Douglas Richard, *Nashville, Tenn Delanp, S P, New Orleans, La*, Dolliber-Goodale Co, Boston Mass, Dahlstadt, N G, Paxton, Ill

Elliott, A R, New York, N Y

Ferguson, M B, Winnipeg, Man, Ford, Chas, New York, N Y, French Pinckney St Louis, Mo, Fuller C H Adv Agency, New York, N Y Fermier, Pierre, Weisburg, Ind

Griswold, R W, Bay City, Mich

Hagler, E E Springfield, Ill Hillis, R J, Altoona Pa Hummel, A L, Philadelphia, Pa, (2) Herald Despatch Co Decatur, Ill, Hart, Mary J, Detroit, Mich Hartranft, Rufus C, Philadelphia, Pa

Jelks, J T Hot Springs, Ark Jordan, J R, Mobile, Ala Jones, W S, Camden, N J, Jenkins, Ralph, Washington, D C, Jordan, J R Montgomery, Ala

Keener, W T, Chicago Ill

Leedom, Chas, Philadelphia, Pa, Lord & Thomas, Chicago, Ill Lehn & Fink New York, N Y, Lentz, Chas & Sons Philadelphia, Pa Lillie Park Sterling, Ill Loeb, Hanau W, St Louis, Mo

Miller, J H, Pana, Ill Mann, E C, New York, N Y, (2), McIntyre, A D, Albuquerque N M, Morse, Lyman D Adv Agency, New York, N Y, Maxwell W E, Portland, Ore, Mays, Thos, J, Philadelphia, Pa

New England Vaccine Co, Boston Mass

Peck George Elizabeth, N J Pantagraph Printing & Stationery Co, Bloomington, Ill Palmer, E R Louisville, Ky, Patterson, M F, Chicago, Ill

Rio Chemical Co, St Louis Mo Rochelle, W F, Jackson, Tenn, Robertson, E B, Jackson Cal

Schieffelin, *W. H & Co, New York, N Y, (2), Smith*, Q C, Austin, Texas, Stork, C Warner, Baltimore, Md, Sellman, Wm A B, Baltimore

Treat, E B, New York N Y, Thorp, D D, Lansing, Mich

Vaughan G T Philadelphia, Pa

Wiggin, J L, East St Louis Ill, Woman's Medical College, New York N Y Western Pennsylvania Medical College, Pittsburg, Pa, Wood, John S, Collinwood, Ohio

The Journal of the
American Medical Association

Vol XXIV CHICAGO, MAY 4, 1895 No 18

LECTURES

LECTURES ON INTRACRANIAL SURGERY

VII—BRAIN TUMOR AND ITS SURGICAL TREATMENT

BY EMORY LANPHEAR, M D , Ph D
ST LOUIS, MO

Resuming description of cases of tumor of the brain and its envelopes, upon which I have operated, I next wish to relate the history of an

Osteoma—Operation—Recovery —W L W , of Fairport, N Y , aged 28 years, I first saw in June, 1889 His family history was good and his health excellent until 1884, when he had syphilis In June, 1887, he fell and injured the right side of his head, from which he was unconscious for several hours Soon afterward he began to have headache with a tender spot just in front of the right parietal eminence , then there was a change in his disposition , he became irascible, shiftless and vulgar, began drinking heavily and taking morphin for the head pain Some time during 1888 he had a "stroke of paralysis" after a hard debauch, the left hand and arm remaining paralyzed for some weeks, motion gradually returned under large doses of iodid of potassium During the latter part of May, 1889, he had intense headache over the motor region of the right side of the head, accompanied by vomiting and much difficulty in walking He again drank heavily and on June 1 had a second paralytic attack He was found unconscious , completely paralyzed upon the left side, and with aphasia, agraphia and word blindness, as was noted June 2 after he regained consciousness His entire vocabulary consisted of 'God damn fool" and "morph," the latter being a request for morphin uttered in a piteous tone For several days convulsive movements of the paralyzed side were noticed, leading to the conclusion that the lesion was superficial He was placed in my care June 5 and remained under observation for a number of weeks, the aphasia continuing unimproved, only a slight degree of motion returning in the leg and none in the arm, in spite of the most vigorous antisyphilitic treatment and the use of electricity The frequency and severity of the convulsions of the affected side became less and finally this symptom disappeared The 'morphin habit" was cured His general condition improved to a remarkable degree and he became fat on immense doses of iodid of potassium On August 1 he could read the newspapers and novels for hours, was feeling well and decided to return home , the paralysis and aphasia continued the same, so I accompanied him to his home in New York He came to me again Feb 5, 1891, anxious to be trephined, as he had heard me say that was the only chance of relief The paralysis of left arm was still complete, but a little motion was found in the leg and he could walk with the aid of a crutch Some command of language had returned, but speech was child-like in character General health fair

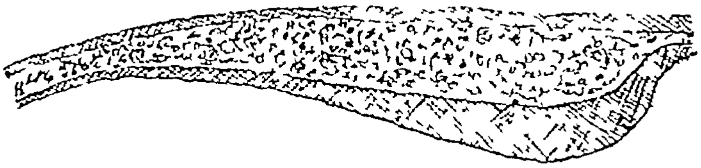
At 10 A M , Feb 22, 1891, with the assistance of Drs W S Allen and John Punton, I opened the skull with chisel and mallet and attempted to enlarge the opening with bone forceps, but the tissue was so hard at the point of attack that a very strong pair broke and it was necessary to complete the operation by carefully chiseling away the bone, bit by bit A tumor of the bone was found, extending from near the middle line at a point just over the Rolandic fissure downward and forward over the motor area for a distance of nearly three inches A cross-section presented the appearance of the accompanying illustration

The external table was not at all raised or thickened but the vitreous plate was very thick and excessively hard After removing the bone, I opened the dura and inspected the brain The cortical substance of the arm center and the posterior lower part of the frontal convolutions appeared blanched—"atrophied," as Dr Punton expressed it—and he further expressed the opinion that the speech center was, in this patient in the right hemisphere I then explored the subcortical tissue and white substance to the internal capsule at two points, but found no sign of old hemorrhage I closed the two wounds in the dura with fine catgut, checked oozing with hot water, inserted a drainage tube and closed the scalp at the end of one hour and forty minutes

At 6 P M , he was in fine shape He spoke much better than before the operation, said he could move his leg with greater ease and expressed himself as very hopeful of permanent benefit

My entry for February 24 says "Eats and sleeps well No fever Says he feels much better than before the operation He can completely flex leg and thigh of left side, which was impossible before Got out of bed and walked around ward last evening! And to-day went to water closet for bowels to move Passes urine with far less straining than any time since paralysis began "

The drainage tube was removed February 26 and permanent dressings applied The wound was in good condition and at the next inspection (March 2) was found healed by primary union March 14 he was walking without a cane, the paralysis of the leg having almost entirely disappeared and the arm much better—some movement in the fingers being perceptible He then said "My bad headache is gone with all my other bad feelings , things look clearer and more natural than in years " There was little more improvement during his stay in the hospital He was discharged April 27 in perfect health—paralysis much better than previously and mental condition decidedly better



Section of osteoma actual thickness

He returned to the hospital on June 1, in good condition, but under the influence of whisky and with but a few dollars in money—hence very much discouraged As he was not ill he was discharged from the hospital June 2 He committed suicide at Leavenworth, Kan , June 3 The postmortem examination was made by Dr M S Thomas, who recorded that Rigor mortis was complete and firm on the right side, but not so complete on the left Left arm one inch less in diameter than right, and left thigh one and one-half inches less than right A somewhat circular opening was found on the right side of the head covered by scalp with large C-shaped cicatrix Calvarium removed having in it a roundish opening (loss of bone) 2 x 3½ inches There was no evidence of suppuration , there was an adhesion of the dura mater at the edge of the bone and a thin ligamentous filling-in of the opening already begun *The brain seemed to be perfectly healthy everywhere* The conclusion, made before the jury, was that a recent surgical operation had been performed on the head and that he came to his death from morphin taken hypodermically, etc

It is to be regretted that this patient killed himself so soon after recovery from the operation, as it would have been instructive to note the amount of improvement that might follow removal of such a long-continued pressure Is it possible that complete regeneration would have eventually been noted? I think it hardly probable But in spite of this, I was well satisfied, indeed, with the decided change wrought by the operation If I had had the courage of my convictions, and operated when he first came under my care, I believe a cure might have been effected Three other points are worthy of notice

1 The fact that the patient stood the prolonged operation so well Had I not spent much time in trying to cut the bone with forceps, and had I omitted the useless exploration of the brain, I might have completed my work inside of an hour, yet in spite of the severity of the operation, the long-continued anesthesia, and the use of the mallet and chisel, there was practically no "shock" I account for this chiefly by reason of complete hemostasis—there was not more than four to six ounces of blood lost altogether

2 The rapidity of convalescence As noted in the history, this man insisted upon getting up inside of twenty-four hours, and never could be kept in bed except at night after the second day Yet no harm resulted, so far as we could determine

3 Aphasia with right-sided lesion Since the physician who made the autopsy is positive in his assertion that there was no lesion discoverable in the brain, we must conclude that the paralysis was due to the pressure of the tumor, and the aphasia also to the same cause, if this assumption be correct, the speech-center must have been located upon the right side He was, he asserted, ambidextrous, but wrote with the right (paralyzed) hand He learned to write his name with his left, after convalescence from the last comatose condition

Another case, of especial interest on account of the favorable result, as well as the localizing symptoms, was the following

Subcortical Tumor—Operation—Recovery —A C, stockman from Montana, consulted me Dec 18, 1890 He was a Swede, 41 years of age, married fifteen years His family history was good, and health excellent until 1876, when, in Southern Kansas, he had what the doctor called "malarial fever," from which he was in bed many weeks, and did not completely recover for more than a year, never had been as well since as he was before this attack He suffered from heat stroke in 1878, after long exposure to the hot sun of the prairie, he was very sick for several hours, and convalesced slowly, being in bed fully two weeks Afterward he was subject to "sick headache," *i e*, attacks of pain upon the top and left side of his head, accompanied by great prostration, vertigo, and vomiting of mucus, these were promptly relieved by a brisk cathartic The last attack occurred in March, 1889, but a dull pain in the left side of the head began soon after, and had been pretty constant since In September or October he began to have trouble with his right arm and side of face—slight spasmodic contraction, with muscular weakness The paroxysms had increased in frequency and severity, until the spasmodic contraction of the muscles was so great as to be exceedingly painful, and he was positive that the uniform course was this spasmodic contraction of muscles of the right side of the face and head, especially marked in the eyelid, quickly involving the hand, then the arm and forearm, and neck, causing violent spasm of the flexor muscles of the arm, forearm and fingers, the convulsion always begins with pain and severe contraction of the muscles about the outer side of the right eye and the temporal region, during the attack the head and eyes turn violently to the right, and he gasps for breath, he becomes totally aphasic for a period of ten to fifteen minutes after each spell, but there is never any loss of consciousness He was very positive as to the constancy of this course The attacks appeared two or three times a week, but though increasing in number, more than two weeks elapsed between the last two before the examination He felt very much exhausted for some hours after more recent convulsions, and a numbness persisted in the hand and arm for several hours Examination showed no trouble with the urine—specific gravity 1026—or with the organs of the chest and abdomen The retinæ were pale—no evidence of choked disc

While there was no history and no signs of syphilis, I put him upon appropriate treatment for gummy tumor for some weeks, and kept him under careful observation This was the only alternative, as he would not consent to operation He had only two attacks in January 1891—one on the 15th and the other on the 27th January 30, I suspended the antisyphilitic remedies, and ordered Charcot's "black mixture," bromid of sodium, pepsin and charcoal in glycerin and water He disappeared

April 7 he again consulted me, expressing himself as anxious for operation, as the convulsions returned early in February, and were getting very hard and numerous—sometimes two in one day Two or three general epileptic seizures had occurred within two weeks, the pain in the head was becoming unbearable, and his general health failing He had an attack of minor degree in my office, tallying well with his previous description, urine passed about an hour later showed specific gravity of 1032, with sugar in considerable quantity, but no albumin or phosphates I prescribed 6 drops of the fluid extract of syzygium jambolanum thrice daily, and a tonic of arsenic and bitters Under this he improved in his general condition, the glycosuria disappeared, and he was in such good shape that I sent him to the hospital April 24

Operation April 26, assisted by Drs Monks and Maxson On removing a portion of bone 2 x 3 inches over the speech and arm centers, the dura presented an unduly tense feeling, but did not protrude into the opening, nor present any evidence of abnormal growth upon it—so it was incised in a horse-shoe flap and turned back The brain showed through the pia as slightly reddened beyond the normal, closer inspection showed what appeared to be a tumor, and palpation revealed a hardness that ought not to be present, situated just at the lower end of and anterior to the fissure of Rolando I therefore attempted to raise the pia, but finding that too much traction wounded vessels of considerable size, I carefully tied vessels running in the direction of the affected area by slender catgut, and then cut through the somewhat elevated cortical tissue—very gently, for fear of wounding tissues which should escape injury A small tumor, of pinkish-white color, was thus disclosed, and examination showed that it did not present firm attachments, that is, it did not infiltrate surrounding structures Attempts at enucleation, however, proved futile, and I was therefore compelled to remove the tumor by means of a sharp spoon, thus preventing microscopic examination—much to my regret The tumor was the size of a very large cherry, and was quite vascular, the surrounding tissue, too, was engorged, and consequently hemorrhage was very brisk However, I succeeded in curetting away all diseased tissue, and then tried to arrest the bleeding with hot compresses, this failing, I was compelled to pack the cavity with iodoform gauze, quite lightly, and close the dura and scalp around the protruding gauze No attempt to replace bone was made Duration, fifty minutes

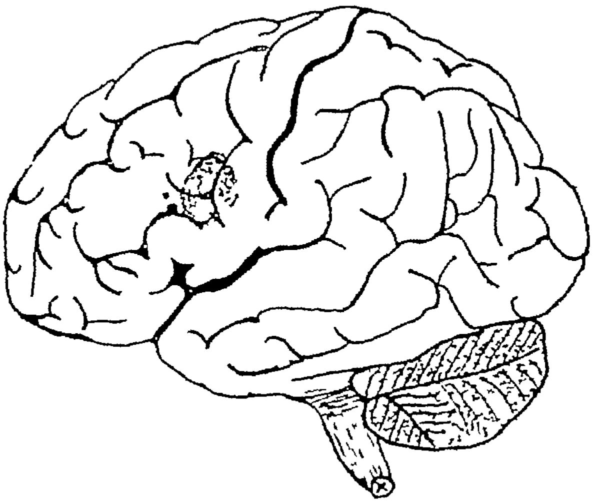


Diagram showing location of tumor

The patient was put to bed in bad shape—shock profound and pulse weak and thready Eight hours after operation the patient appeared to be conscious but could not speak, the right arm was paralyzed, and so much difficulty in swallowing was present that all medicine was given hypodermically and stimulants and food per rectum His pulse was 140 and weak and his temperature 102 degrees, and I feared much for his safety During the night his condition improved somewhat but the paralysis continued all the next day and the difficulty in swallowing persisted

April 28, the condition was much the same at 8 A M, pulse 148, temperature 102 5 degrees He had slept some during the night The dressings were removed and the iodoform gauze drainage carefully withdrawn Very little oozing had taken place and no bleeding followed removal of the packing—so the separated margins of scalp were pressed together and permanent dressings applied This day he improved rapidly so that in the evening he murmured, "Water water," and drank greedily with but little difficulty, Evening temperature 100 degrees

April 29, speech returned to a remarkable degree and voluntary movements of the right side were noticeable From this time on convalescence was satisfactory in every respect, the aphasia and paralysis totally vanishing He had but one Jacksonian attack—very slight—which was noted the day before his discharge, May 19 He appeared to be in excellent health I saw him again on June 5, and again upon July 9 at each of which visits he declared himself perfectly cured He promised to keep me informed of future progress, but I never saw or heard more from him

It is peculiarly unfortunate that the character of this subcortical growth could not be ascertained It had the peculiar appearance of glioma The absence of implication of surrounding tissues would lead one to believe it was not malignant, though the rapidity of growth (October to April) would indicate that such might be its nature It is possible that it may have begun much earlier than the date set, but from the marked increase in number and intensity of the paroxysms in the few weeks prior to operation, I believe the tumor must have been growing with a deal of rapidity

I can not leave the subject of tumors without giving a short description of my other fatal case

Cyst of the Arachnoid—Operation—Death —Wm K , from the Indian Territory, was brought to me by Dr O W Krueger, Jan 8, 1892 The previous history was not obtainable to my satisfaction but it seems that he was as intelligent as other boys until about the age of 14 years when he began to have epileptic convulsions of the right side, followed by temporary aphasia The spasms finally became general, partaking of all the characteristics of *grand mal* including the mental deterioration Finally, partial paralysis of the right side gradually made its appearance accompanied by difficulty in remembering names and other nouns As the epilepsy increased in severity this paralytic influence deepened until at last he was completely paralyzed in the right upper extremity the use of the lower was so greatly impaired as to prevent walking, and language became totally obliterated He frequently read the papers for a little while at a time and seemed to understand much of what was said, though his intelligence was evidently greatly impaired

Owing to the fairly clear, though not wholly satisfactory evidence, that the convulsions invariably began in the right hand, then spread until the whole body was involved, and also to the existence of the aphasia, I had him sent to the hospital where I opened the skull, assisted by Drs Krueger and Maxson Upon opening the dura a cyst of the arachnoid was found, much larger than a hen's egg, lying over the speech and arm centers This I tried to remove entire, in doing which I fear I exerted too much pressure upon the brain, for the patient ceased breathing (although no chloroform had been given for several minutes) and only revived by long-continued artificial respiration I hastily cut away the cyst and closed the dura, only stopping to notice that the speech and arm centers were of a very pale hue wholly unlike the surrounding cortical tissue, and that the impress of the tumor upon the brain did not disappear with removal of the cause While closing the dura, another suspension of respiratory efforts was noted and again artificial respiration had to be instituted The wound was quickly closed and dressed and the patient placed in bed as hastily as possible, when every possible means to combat shock was employed—to no avail, he died within a very short time An autopsy was not obtainable

What the result might have been in this interesting case can be only a matter of surmise, but from the long continuance of the pressure upon the two important centers, I feel sure that the prospect of complete recovery was not good, but probably the mental condition would have vastly improved had he lived

While the direct cause of this patient's death is somewhat of a mystery to me, I can not but feel that I did wrong in attempting to secure a beautiful pathologic specimen—it would have been better surgery to simply open and drain the cyst, which was evidently not malignant—but I did not know at the time that such treatment would yield satisfactory results Since then I have treated one other simple cystic tumor by such means and with perfect results My seventh and eighth cases were in young patients, of tubercular character, and gave no points of especial interest save the satisfactory and speedy recoveries They will be reported in due time in some medical publication

Based upon this experience, and a careful study of the subject of brain tumor, I give you these

RULES FOR TREPHINING

When to Operate—1 A headache, which becomes more and more intense, persisting for weeks, with later exacerbations of an agonizing character, followed by stupor, disturbed sleep, loss of memory and optic neuritis, is a strong indication of tumor in the frontal region and warrants exploratory trephining, upon both sides, if necessary, in order to find it

2 A tumor of the frontal convolutions, as indicated by the signs just enumerated, may encroach upon the motor zone so as after a time to give rise to some focal symptoms (spasm or paresis), in which case the trephine should be applied just in front of the coronal suture of the side opposite to the motor symptoms

3 Tumors of the mid-brain may present as evidence of their existence, a tendency to stupor, occasional irritability and childishness with disturbances of the motor area (Jacksonian epilepsy) and papillitis—generally choked disc, craniotomy over the upper Rolandic region is the proper treatment

4 Disturbances of the muscular sense, with the usual mental impairment and with choked disc, are sufficient to justify examination of the supra-marginal gyrus

5 When the symptom group consists of word-blindness and lateral hemianopsia, with moderate loss of power in one half of the body, the skull should be opened over the region of the inferior parietal lobule and angular gyrus

6 Homonymous hemianopsia, not dependent upon other cause than tumor, indicates operation over the cuneus and first occipital convolution

7 When hemianesthesia accompanies lateral homonymous hemianopsia, the lesion lies between the cuneus and the primary optic centers, trephining should be done so as to expose the point where the occipital, parietal and temporal lobes meet

8 A tumor giving word-deafness as its most prominent symptom, may be reached by opening the skull on the left side in the region of the posterior part of the first and the upper posterior part of the second temporal convolutions

When not to Operate—1 It is useless to attempt operation in cases of undoubted brain tumor, when the growths are situated in the corpus callosum and the optico striate region

2 It is questionable whether or not operation is advisable in cases in which the usual symptoms of tumor are accompanied by disturbances of speech as the *only* "localizing" sign, the lesion will probably be found to be not near the speech center, as one would infer, but affecting the pons, medulla and the point of origin of the cranial nerves

3 Nystagmus, either unilateral or double, permanent or temporary, complicated by paralysis of the motor nerves of one or both eyes, constitutes a barrier to operation as the trouble is unquestionably basal

4 When nystagmus appears in the history of a case suspected to be tumor, associated with epileptic attacks or hemiplegia, the tumor may be upon the convexity just behind the fissure of Sylvius, but so often this is *not* the location that operation can not be advised

ORIGINAL ARTICLES

FORCIBLE ALVEOLAR EXPANSION IN THE TREATMENT OF CONSUMPTION

BY W H WEAVER, M D
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In the search for a cure for this most deadly of diseases, it seems that experimentation has been directed entirely toward the discovery of some wonderful specific, (to the exclusion of the simple truths of physics, anatomy, physiology and pathology) All the energies of the profession and of manufacturing chemists have been spent in the vain hope of finding this specific,—to their great pecuniary advantage

Now that the specific hunters in Germany and elsewhere have about lost themselves in the mazes of organic chemistry, it might be profitable to work over some old knowledge in these branches, which has been at a discount for some time past

A classic paper on this subject was read in the Philadelphia County Medical Society, by Dr Thos J Mays, and appeared in the *New York Medical Journal*, March 10, 1888, entitled, "Apex Expansion vs Pure Air in Pulmonary Consumption" Concerning the cure of consumption, the following conclusions were drawn "That the question of curing the disease did not depend on the purity or freshness of the air, nor upon the number of bacilli the atmosphere might contain, nor upon the amount of oxygen which might be introduced into the body—for these were all secondary considerations, but it was simply a mechanical question,—a question as to the best mode of expanding the lungs, and especially the apices of round-shouldered and flat-chested patients, of removing the infiltrated products already existing, and of enhancing the constitutional resistance"

It may be said that the tubercle bacillus inhabits the lung tissue as an infection of tissue already damaged by hereditary malformation, sluggish circulation, or the extension of catarrhal bronchiolitis, plugging the alveoli The bacillus aids in the extension of the infiltration, the same as other infectious germs poison tissues which have been injured Dr Prudden has recently shown how the presence of the germs of suppuration hastens the destructive processes by cavity formation in a previously tubercular lung, when the two processes of tuberculosis and suppuration run a simultaneous course

Has it never occurred to these "specific" hunters that if a remedy should be found which would kill the bacilli *in situ* in the tubercularized tissue, the alveolar plug of gelatinous matter would still remain as a spore—containing a source of irritation, and as soon as the remedy should be withdrawn, the disease would break out anew? "An empty house is better than a bad tenant" The treatment which does not drain the alveoli, empty them, and restore ventilation, will never be of very great benefit In the case of mastitis, where the galactiferous glands and tubes are plugged, their drainage is accomplished by nursing, the tubes are emptied and healthy conditions and functions restored

Minute anatomy and physiology tell us that the alveolar wall is composed largely of elastic tissue, which aids in the expulsion of air when released by the relaxation of the muscles of inspiration Air pressure will dilate them the same as any elastic vessel, and as soon as the pressure is removed, this elasticity together with the expiratory muscles, forces out the contained air as well as any fluid which happens to be in them The alveolar plugs are composed of a thick gelatinous and albuminous fluid These plugs irritate the lung tissue and become the foci for extended infection The elasticity of the alveolar walls is retained until the inflammatory process has progressed to the destructive stage, then there is necrosis of portions of the consolidated area If we succeed in an effort to empty the air cells of this plug, the cell walls retain their continuity and a return to health is inevitable In surgery, drainage of wounds and cavities probably septic, is absolutely necessary to the healing process Physiologic drainage of the alveolar cavities is just as certain to give good results This drainage is a simple mechanical procedure possible of accomplishment by every patient The gelatinous plugs with their bacilli are carried out by the air current into the larger tubes and expectorated, These principles have been the basis for the method I have pursued in the treatment of the cases in this report

The method was described in an article which appeared in the *New York Medical Journal* Oct 13, 1894, entitled, 'Forcible Apex Expansion in Incipient Phthisis" It consists not only in full breathing, which has been recommended in various ways, but after a full inspiration, the breath is held for a moment by closing the glottis—*just as the breath is held while straining at stool*, so as to increase the air pressure in the lungs It should produce a ballooning of the chest and consequently of the air cells themselves The effect is increased if, during the holding of the breath, the lower chest is compressed with the hands, which action forces the air into the upper chest where the consolidation usually is, and at the same time lifting the weight of the arms and shoulders off the chest After a time the inspirations become much fuller and a higher tension develops If the patient is weak, the breath should not be held more than two to five seconds, with increasing strength the time may be extended a few seconds at each effort But the length of time the air is held is not important, the tension which can be developed being the end desired These efforts may be continued regularly every two hours during the day, before arising in the morning and after retiring at night, as there is probably more air inspired in the recumbent position, because the weight of the arms is removed from the chest Holding the breath has been mentioned by some writers, but usually the patient is directed to exhale slowly at the same time It is thus performed without closure of the glottis, by simple exertion of the inspiratory muscles No tension is developed and it is consequently only an inspiratory exercise and fails to accomplish the end desired because it does not forcibly dilate the alveoli The direction to hold the breath is very indefinite without specifying the manner in which it must be held An inhaler may be used with some antiseptic and soothing inhalant and to stimulate interest in the treatment The patient may be told to inhale deeply so as to get the medicament well into the lung tissue" It will require some practice in order to get the best results, but an ambitious patient will pick it up very quickly The immediate result will be an increased amount of oxygen in the blood, a strengthened heart's action, and a facilitated expectoration, which alone gives relief In young persons the elasticity and capacity of the chest will be permanently increased, the progress of the disease inhibited and immunity from future attacks almost insured

The treatment by differentiation of air has a similar effect on the lungs, but in order to be of much benefit more than one treatment a day would be required

The contra-indications are hemorrhage, and for a few days after it has stopped, the pulmonary gymnastics should be suspended But, I think in my cases the treatment has had rather a beneficial effect on the hemorrhagic tendency, probably because the pressure tends to close up the bleeding vessels A weak right heart and possibly any heart disease would require great care in introducing even a slight and temporary obstruction to the pulmonary circulation However, such cases are quite rare and will not greatly interfere with the general adoption of the method

The existence of cavities seems to be no contraindication, as in one case not in this report the whole left lung seemed to have been reduced to cavities and the treatment has been followed with success for over a year Pleurisy, if quite general, will be aggravated by the chest movements for a time until the consolidation begins to disappear To overcome the muscular atrophy about the chest any gymnastic exercises will be of benefit At the same time, proper medication should be employed in order to increase the chances and rapidity of the recovery, improve nutrition, stimulate blood formation, or in any way improve the condition of the patient For high fever, I believe bathing is the proper antipyretic

The rapidity of the improvement will depend greatly on the extent of the consolidation, and the capability of the patient to understand the necessity, and the zest with which he pursues the treatment A frivolous person will not put forth enough energy to take a full breath and hold it, or even test the treatment,—as in one of my cases I could not get the patient once to take a full breath, although the case is reported, I do not consider that the treatment was ever tried twice in this case

The histories of the following cases demonstrated the efficacy of the treatment as well as the accuracy of the principles which lead up to it

Case 1—Mrs M J, aged 35, no tubercular family history During the winter of 1892–93 had a severe attack of bronchitis and in March, 1893, asthma was added to her torture In May and June there was improvement in the asthma, but the expectoration was profuse There was then afternoon fever, rapid pulse, night sweating, and emaciation—pleuritic pains and soreness through the right upper chest Examination of the sputum revealed the presence of tubercle bacilli Physical examination showed a marked area of dullness posteriorly over the right apex, by the slight dullness bronchial respiration, bronchophony and râles The treatment included an inhaler using a eucalyptol mixture, tonics when they seemed to be of any benefit, a trip to a farm in the country, and the pulmonary gymnastics or breathing exercises holding the breath as described and other physical exercises with Indian clubs, the exerciser, or any means which tend to develop the muscular system In December, 1893, physical examination showed that the area of consolidation had entirely disappeared, and there had been steady general improvement during the whole treatment At present she is practically proof against the tubercle bacillus

Case 2—Miss H M, aged 28, stenographer, mother died of consumption Began treatment August 9 1893 for hay fever, which was readily cured by the removal of some post-nasal hypertrophy Had been feverish and losing weight and strength, sweating at night, and coughing of late Physical examination showed a marked consolidation at the right apex As the expectoration was scanty, no microscopic examination was made Treatment much the same as in Case 1, save that the patient had only a short vacation of two weeks from work As she was ambitious to get well she pursued the treatment with great determination In this case I was able to examine the patient frequently enough to observe the rapidity with which the infiltration disappeared so that I was able to foretell almost the exact time it would take to remove it and pronounce her practically cured Feb 1, 1894, the lung had entirely cleared and the symptoms of the trouble had disappeared Her weight had increased to normal and to this day she is well

Case 3—Mr J A, aged 32, student, whose family history reveals the fact that four sisters have died of consumption He came to me Nov 1, 1893, feeling very miserable was coughing, losing weight sweating at night afternoon fever, temperature 100 to 102, pulse 96 to 110 Physical examination disclosed a considerable area of consolidation over upper half of left apex Microscopic examination showed numerous bacilli Treatment brought about a complete recovery by the latter part of March, 1894 At this writing he assures me that of all the colds he has had this winter not one has extended below the larynx, when previously every cold he had descended to the chest, and that he is entirely well and weighs 148 pounds

Case 4—R D, aged 26, began treatment Dec 23 1893 having hypertrophic rhinitis and catarrhal laryngitis Weakness, emaciation and fever induced me to examine the lungs when the evidences of consolidation of the apex of the left lung were unmistakable As one reputable physician had previously diagnosed the case one of tubercular laryngitis I felt considerably interested in the case Treatment was followed by complete recovery, in the month of April, 1894, and his health remains good to this day

Case 5—Mr H P, aged 49, carrier, came to me Feb 18 1894, having cough with profuse expectoration pain in the right side, emaciation, having lost twelve pounds losing rapidly the past month Physical examination showed an area of consolidation in the lower anterior portion of the middle lobe of the right side Patient often had an evening temperature as high as 102 5 degrees F Pulse rapid especially during fever Bacilli numerous in the sputum Treatment brought about a slow but steady recovery and all signs of the local lesion had disappeared in November 1894 This patient was almost constantly out of doors, and if fresh air will prevent tubercular consumption, he should never have developed the disease

Case 6—Miss B A, aged 18, began treatment March 28, 1894, having had hemoptysis, the two nights previous Has coughed for some months fever every day mostly in the afternoon, ranging from 101 to 103 F, emaciation and night sweating Examination showed consolidated left apex Treatment included ergot for hemorrhagic tendency and tonics Pulmonary exercise was neglected by this patient I endeavored in every way to induce her to continue the practice, but failed, and in the course of two months she passed from my charge and has since died

Case 7—Mr C H M, aged 38 came to me April 12, 1894 Had had attacks of stomach disorders for several years, emaciation, slight cough, scanty expectoration, containing a few scattering bacilli Physical examination showed infiltration of the apex of the right lung Temperature 100 F, pulse 90 to 100 Treatment removed every trace of the trouble in eight months

Case 8—Miss L, age 24 came April 18 1894 having a temperature of 101, pulse 90 hypertrophic rhinitis slight cough, and scanty expectoration, emaciation and profound prostration, tired all the time, weight 95 pounds Physical examination showed increased expiratory murmur over right apex, also voice and whisper sounds, with dullness on percussion Treatment was energetically carried out and in

August every sign of the lung infiltration had disappeared, her general condition improved and weight increased to 115 pounds

Case 9—Miss E P , aged 25, came to me May 7, 1894, having severe pain and tenderness in back of upper dorsal region Had been failing rapidly during the winter, with irritating cough and scanty expectoration, afternoon fever and rapid pulse Physical examination found consolidated right apex, with some pleuritic friction, sounds, soreness, and pain in that region, chest expansion twenty-six to twenty-seven inches Treatment removed the area of consolidation by November

Case 10—Mr C J D aged 24, consulted me June 26, 1894, for relief from fever, night sweating, loss of weight and strength, and cough Weight 112 pounds Upon examination I found dry râles, and the usual evidences of a consolidated right apex extending as low down as the third rib Temperature 101 to 102, afternoons Pulse ranging about 100 Microscopic examination showed numerous tubercle bacilli in the sputum Treatment at once instituted and followed out vigorously, brought a complete cure August 29 there were no râles or other signs of the consolidation discoverable, and later in the fall he recovered all his lost weight

Case 11—Miss L K , aged 29, consulted me July 20, 1894, for supposed nasal catarrh, and a generally run down condition, weight 99 pounds She had afternoon fever, cough, but scanty expectoration Upon examination, the usual signs of consolidation of the left apex were found In two months treatment she had gained ten pounds, and in one month more the lung tissue had resumed a normal condition

Case 12—M H , aged 23, book-keeper, consulted me Feb 27, 1895 for an irritating cough and general weakness, following a recent attack of la grippe Patient was never in good flesh, being tall, thin and pale, recently losing strength, and what little superfluous flesh he had Had afternoon fever, pain in the left upper chest, expectoration mostly in the morning, which on microscopic examination was found to contain numerous bacilli Examination of the chest showed moist râles, slight dullness and bronchial breathing over left apex, anteriorly and posteriorly Treatment at present writing is giving the best results, having reduced the afternoon fever from 101 to 99, increasing the weight by six pounds and restoring almost his normal strength and feeling

Case 13—R W , aged 30, merchant, seen in consultation with Dr A Salter at Lena, Ill , April 15, 1893 For six months or more previously had night sweating and emaciation, weight 128 pounds, temperature, morning 95 51 to 97, and every afternoon as high as 102 F , pulse 90 to 100 Examination disclosed a complete consolidation of the right upper lobe Treatment including tonics and 10 minim doses of creasote three times daily, alternating with hypophosphitis Breathing exercise was begun and improvement began in two weeks, which was steady until January 1894, when there were no signs remaining of the lung infiltration His weight at present is 150 pounds, and he is an active business man

Case 14—Mrs H , aged 33, was also seen with Dr Salter, Feb 4, 1894 Had been taking various remedies for a year or more for a cough and other pulmonary symptoms, complaining mostly of pain in the shoulders and upper chest Upon examination the right apex was consolidated, and slight infiltration of the left apex While before treatment the patient was so poorly that she could do no housework, she has recovered sufficiently to do her own housework, gaining twelve pounds in weight, and two inches in chest expansion There are at present no signs of the old consolidation

Case 15—Mr J H , aged 28, book-keeper This man was seen in consultation with Dr P L Anderson of this city, June 1, 1894, having in all about fifteen hemorrhages , night sweats , temperature 102 F , pulse 120 , profound weakness , barely able to do light work Sleep greatly interrupted by coughing and a great amount of expectoration Microscopic examination showed very large numbers of bacilli Patient had attacks of asthmatic coughing, and hay fever symptoms during September Upon examination of the chest the lower lobe of the left lung was found consolidated, also the apex of the same side This patient has not been seen for some months, but at my request he came in for examination He says that he had considered himself cured, having increased in strength so as to be at work every day—weight increased from 128 to 145 pounds He coughs some, however, and expectorates most in the morning He says that he has not practiced the pulmonary gymnastics for some time Upon examination pulse and temperature are normal, as also were the respirations The left chest was found somewhat contracted, and the respiratory capacity diminished Percussion note same on both sides , auscultation revealed no bronchial breathing or voice sounds, or anything that would indicate consolidation There were, however, a few fine and some coarse mucous râles, with diminished vesicular murmur over the left lower lobe and the upper half of the left upper lobe Also there were heard some faint pleuritic friction sounds over the left apex This case is interesting, in that it shows how extensive and how rapid the tubercular processes may be, and still be entirely checked and recovery take place in a comparatively short time by this system of treatment The condition of the left lung at the present time may be considered as practically restored , although there still remain catarrhal processes in the bronchial tubes, some few scattering plugged alveoli and others which are entirely collapsed or obliterated and replaced by cicatricial tissue which interferes with its normal elasticity and respiratory capacity

Case 16—Mrs B P , age 33 This case was also seen in consultation with Dr Anderson some time in March, 1893 A diagnosis of pulmonary consumption was made in September, 1892, by Dr Anderson and confirmed by Dr Wm E Quine of this city, and the patient advised to go immediately to Albuquerque, N M Patient remained in New Mexico about four weeks during which time she suffered greatly from pleuritic pain, becoming extremely weak, night sweating, chills and fever, temperature at times as high as 103 degrees F , lost all appetite and it was with the greatest difficulty that she stood a stage ride of thirty miles to the nearest railroad to Colorado Springs During a stay of two weeks in Colorado Springs she was much worse than in New Mexico Believing there was no hope for recovery she came home Soon after her return to Chicago, she began to improve and was able to come to the office for consultation I made an examination of the chest and found the usual evidences of tubercular deposit in the apex of the right lung, accompanied with the most extensive pleuritic friction sounds I think anybody ever heard over the upper half of the chest Deep breathing caused a great deal of pain in the chest Pain was the most distressing symptom in the case, while there was also a great deal of emaciation, anemia and night sweating Weight 110 pounds She was cautiously trained in the pulmonary gymnastics and light physical exercise Notwithstanding the pleurisy and the pain caused by the taking of full breaths, this patient continued the pulmonary gymnastics until every sign of the consolidation had disappeared, which was in September, 1894 There is still considerable pleuritic pain but nothing compared to what she had previously suffered

It would seem from the results in this case that chronic pleurisy is no important contra-indication, and it must be decided by the results after a cautious trial in each case Some patients with sufficient practice may be able to hold the breath at a tolerably high tension, enough to inflate the alveoli without much chest motion

To recapitulate the cases

Recoveries 13 , improved and under treatment 2, dead 1

I consider that of the sixteen, fifteen are consecutive recoveries, the remaining one not having followed out the treatment

Phthisis is curable by the application of well-known mechanical principles, viz , the inflation of an elastic air sac with elastic air, which gradually during expiration expels the semi solid or fluid contents It is necessary in order to get the quickest and best results, to begin treatment while the sac wall is still intact and elastic, for when it is once broken down and cavity formation has begun, then the area must heal by cicatrix

In the matter of prevention of consumption, the same process of alveolar ventilation is necessary and absolutely certain of results During the years of physical growth and development the puny, flat-chested, round-shouldered children should be taught proper methods of breathing, together with occasional forcible expansion of the chest While the bony chest wall is still elastic it should be developed After the age of 25, the capacity for chest development is necessarily limited

126 State Street

SERUM THERAPY IN PULMONARY TUBERCULOSIS, WITH AN EXPLANATION OF SECONDARY SYMPTOMS FOLLOWING THE ADMINISTRATION OF ANTITOXIN

BY CHARLES WILSON INGRAHAM, M D
BINGHAMTON, N Y

Much has been written in regard to certain unpleasant and untoward symptoms attending the administration of antitoxin in cases of diphtheria There has been a disposition on the part of physicians to attribute these symptoms to some peculiarity of antitoxin after its introduction into the system of diphtheritic patients Some regard them as due to secondary septic infection I believe, however, that I shall be able to prove substantially that these identical symptoms will follow the administration of pure serum with the same certainty and severity as they follow the use of antitoxin I base this statement upon the manifestations which I have observed to follow the administration of serum from the blood of the mule in cases of laryngeal and pulmonary tuberculosis

The most constant and unpleasant symptom following the administration of mule serum is the intense eruption which covers every portion of the body and gives rise to terrible itching The eruption is of a bright red appearance and if scratched too persistently will assume for a short time the form of a large "water blister" which appears suddenly It remains for a greater or less length of time, usually a few hours, and then disappears as suddenly as it made its appearance Accompanying the onset of the eruption there is marked anorexia and depression

Another symptom which fortunately does not appear as frequently as the eruption, but which is very much more painful and serious, is the "neuralgic pains" which are most apt to occur in the neighborhood of the point of injection, but which may occur in a remote part of the body The pains are usually of so severe a nature as to deprive the patient of sleep, even after an opiate has been administered I have known them to continue for twenty one days without interruption, although this is an unusually long period

In my experiments with serum, I used that obtained from the mule, because of the recognized immunity of that animal from tuberculosis

In December, 1894, I obtained a full grown, healthy mule, and after he had by good care and feeding been brought to an excellent standard of vitality, tapped the jugular vein and drew therefrom a quart of blood The most careful antiseptic precautions were observed in the operation The hair was shaved for a radius of several inches around the site of the intended incision The skin was then cleansed and finally washed with pure alcohol The lancet used, was procured especially for the purpose and was thoroughly antiseptic The blood was received in a glass jar, especially prepared (I mention these precautions to show that the results finally obtained from the serum were not due to any infection consequent upon its preparation) The blood was allowed to stand twenty-four hours, and the serum was then drawn off and filtered through antiseptic filter paper. This work was done in a cold room to protect against putrefaction changes After the first filtering the serum was allowed to stand a few hours, when it was observed to have thrown down a slight sediment After a second filtering no sediment was observed An effort was made to add a 5 per cent solution of carbolic acid, but by every method tried, a precipitate was thrown down and the serum became cloudy The serum used was, therefore, the pure article, without additions of any description The serum was preserved in antiseptically prepared vials, which were hermetically sealed and only opened as immediately needed Syringe used was an ordinary one drachm, rubber piston and when not in use was kept filled with alcohol The greatest care was observed in cleansing it, following its use Gold needles were used

The first case treated was one of tubercular laryngitis, with secondary pulmonary involvement Cough was severe Expectoration profuse and purulent

Dec 31, 1894 First injection was administered in the lower part of the thigh The amount given was 1 drachm On the second day dose was increased to 2 drachms Cough seemed to improve at once and expectoration diminished slightly No other appreciable improvement either in symptoms or local condition The site of injection gave rise to no swelling or inflammation, more than that attended by needle puncture, and I was congratulating myself upon the ease with which these treatments could be administered when my hopes were severely crushed On about the tenth day the patient complained of severe pain shooting up and down the thigh Examination of the limb gave no indication of inflammation. Next day, however, the limb was swollen, the pain was worse and patient was put to bed Pain was so severe that a hypodermic injection of morphin was given and poultices were applied over the painful area, but with little relief Patient slept but little for nearly a week, at the end of which time the pain was a little better, but it did not disappear until the twenty-first day from its beginning The limb was at no time much swollen and there was scarcely any rise of temperature, except during the period of eruption which appeared soon after the pain set in and continued about four days Subsequent injections, after the pain had entirely disappeared, did not give rise to any further pain or eruption Patient received a total of between forty and fifty injections of the serum of 1 drachm each, but at the end of the treatment no improvement whatever, either in symptoms or physical signs, had taken place

At first I was inclined to believe that the pain and eruption were due to something peculiar in my supply of serum, or perhaps also to some extent due to the condition of the patient, but seeing in current medical literature reports of cases of diphtheria treated with antitoxin which gave rise to symptoms so closely identified with mine, I concluded that the origin of these unpleasant manifestations was to be found in the primary serum

In eight cases of pulmonary tuberculosis, subsequently treated with the serum injections, the eruption was a typical attending symptom, while the pain did not occur unless a large amount of serum had been injected in a short period of time From my study of and experience with these cases, I came to the conclusion that a very minute quantity of serum would give rise to eruption as intense and in every way identical with the eruption following the administration of large quantities, that the pain was not a constant after-effect, only appearing when a large amount of serum had been given, and that with proper precautions, and by not throwing too much serum into the system in a short period, the pain would be wholly obviated The eruption would appear in from three to ten days following the first *injection In one case where only one injection* was given, the eruption was very severe The eruption would usually continue for a period of from three to seven days and would be accompanied with a marked rise of temperature, which in a few instances reached 104 degrees I have noticed that the eruption was more severe in cases of pulmonary tuberculosis of an acute nature The most remarkable phenomena or results following the eruption is a total disappearance of fever for a period of from twenty-four to forty-eight hours and a temporary improvement in general symptoms I am sorry to say that this marked relief following the eruption is only temporary I have never seen any results of a permanent nature Cases of acute tuberculosis in whom the temperature ranged from 103 to 104 degrees daily, previous to the injections, would be entirely relieved from the fever for a period of from two to three days, only to be followed, however, by its return to its former height and persistence, nor would there be any appreciable improvement of symptoms or physical signs of a permanent nature

Although the injections were administered for a sufficient length of time for them to manifest any curative properties, I am obliged to record that I did not in any individual case see an improvement that would warrant a continuance of the treatment

I do not, however, wish to be understood as condemning this line of treatment for the relief of pulmonary tuberculosis, although I am of the opinion that serum therapeutics will find its greatest range of usefulness in the treatment of acute diseases and in the prevention rather than the cure of chronic diseases

The *results which* I *have obtained*, certainly show that serum from the blood of the mule has a limited control over tuberculosis, and even though the results are only temporary, it is highly probable that by increasing the antagonistic properties of the blood by the systematic injection into the animal of toxins designed to increase these natural anti tubercle powers, the serum might be brought to a state in which its administration would give definite results, as a preventive of tuberculosis and perhaps as a curative agent in the very incipient stages of the disease

This paper will prove, however, that the eruptions and the pain which have followed the administration of antitoxin in cases of diphtheria are not dependent upon anything peculiar to antitoxin or to its injection into the system of a diphtheritic patient

The effects of simple primary serum from the blood of the mule, injected hypodermically into the system of persons afflicted with pulmonary or laryngeal tuberculosis may be summarized as follows

1 A fine rash or eruption producing intense burning and itching, which appears usually from three to ten days following the first administration, and continues from three to seven days, when it disappears permanently In some cases it appears only at night, disappearing completely during the day Exposure to the cold open air makes the eruption more intense Rubbing or irritation of the rash will produce large eruptions having the appearance of "water blisters" which soon disappear The intensity of eruption bears no proportion to the amount of serum injected

2 Severe pains of a neuralgic character which only appear following the administration of a large amount of serum These pains appear with no regularity whatever, neither are they manifested for any certain length of time In most cases their severity is governed by the quantity of serum injected These pains do not yield readily to the influence of opiates or other treatment They usually appear near the site of the injection, but may appear in a remote region

3 The typical eruption is accompanied with a pronounced rise of temperature This temperature is also present some hours before the eruption makes its appearance Temperature may reach 104 degrees or even higher It remains at its full height with little or no fluctuation until the eruption becomes less intense

4 Following the disappearance of the eruption, the temperature drops to normal, or even below normal If the case is one of acute tuberculosis and has had a high temperature, the diminution of fever will be as pronounced as in the milder form The temperature will remain nearly normal for two or three days, after which it gradually resumes its former stage In one or two cases the temperature remained low for nearly one week, but eventually it resumed its former height

5 Swelling or puffiness of the extremities, lips and eyelids sometimes accompany the eruption, but usually subsides as the eruption disappears In one case the swelling of the lower limbs persisted in a milder degree for several days after the eruption had disappeared

6 Subsequent injections of serum do not cause a second eruption, though the pain is liable to return if too much serum is given

These symptoms or results bear so exact a resemblance to those which many times follow the administration of antitoxin that I venture to assert that one and all of these secondary manifestations, which cause so much annoyance, not to say danger to the convalescent diphtheritic patient, are due to the effects of primary serum That these manifestations are no more severe following the use of antitoxin than following the use of primary serum.

CAMPHOR-MENTHOL, A SUPPLEMENTARY REPORT

BY SETH SCOTT BISHOP, M D
SURGEON TO THE ILLINOIS CHARITABLE EYE AND EAR INFIRMARY PROFESSOR OF DISEASES OF THE NOSE THROAT AND EAR, CHICAGO SUMMER SCHOOL OF MEDICINE PROFESSOR IN THE POST GRADUATE MEDICAL SCHOOL AND HOSPITAL, ETC
CHICAGO

Since the introduction of this remedy at the meeting of the Mississippi Valley Medical Association in 1891, and published in the JOURNAL, it has come into quite general use for catarrhal conditions of the upper respiratory tract But inquiries have not ceased to come from various parts of the country concerning the method of its application, and for the details of my experience with it since The purpose of these notes is to answer such questions

Although I did not recommend its use until long after I had discovered that the union of these two camphors resulted in a fluid of the chemic formula $C_{10}H_{18}O$, and after I had satisfied myself that we possessed a valuable remedy in this new drug, I am now able to express greater confidence, and to verity my former statements by the experience of others, as well as by my daily use of it up to the present time The experimental stage has passed, and the efficacy of this medicine is clearly established Specialists who were at first skeptical as to its virtue, have since adopted it as a standard remedy in both private and dispensary practice I have taken pains to ascertain the results of their experiences, and add them to my own

The field of application in which camphor-menthol has proved most efficacious is in the following diseases coryza, hay fever, intumescent rhinitis (intermittent and alternating nasal stenosis), hypertrophic rhinitis, simple sore throat, acute laryngitis, tracheitis, bronchitis, and cauterizations to prevent hemorrhage and inflammation

The indications for its use are made clear by a consideration of its physiologic action It contracts the capillary blood vessels of the mucous membrane, reduces swelling, arrests sneezing and irritation, checks excessive discharges, and corrects perverted secretions

For home use and ordinary office treatment, I do not employ a stronger solution than the 3 per cent in lavolin, and for very sensitive cases, like hay fever sufferers, the 1 or 2 per cent solution at first The lavolin itself is a bland and soothing protective to the membrane, and in the combinations indicated we have undoubtedly the most effective and harmless remedy known This means a great deal to both patient and physician, for most of the sprays in use give indifferent results—or worse Indeed, so great has been the disappointment with the old local medicaments, that a well-known writer on nasal diseases entirely *abandoned* them several years ago

Patients should be instructed to treat themselves thoroughly every night at bed time, by throwing a spray of the 3 per cent solution from a lavolin atomizer into both nostrils while slowly inhaling The rubber bulb should be forcibly and rapidly compressed at least eight times for each nostril For the throat, larynx or bronchial tubes, the spray should be thrown through the mouth also during inhalation

In diphtheria, croup, etc , in infants, when it is very difficult to throw a spray into the throat, the medicine may be made to reach the parts by volatilizing it, by placing a few drops of the pure undiluted camphor menthol in hot water, and causing the patient to breathe the *medicated* steam, or a few drops can be heated in a spoon over a lamp, and its fumes will impregnate all the atmosphere of the room Enough medicine need not be used to cause uncomfortable smarting of the eyes Inflammation of the throat, larynx, trachea *and bronchi* can be effectually treated by inhaling the camphor-menthol steam from the benzoinol inhaler

I have found that we can prevent hemorrhage and inflammation, following *galvano cauterization* of the turbinated bodies, by gently packing a pledget of cotton wet with a 20 per cent solution of the camphor-menthol between the burned tissue and the septum, and leaving it there twenty-four or forty-eight hours It is then replaced by a fresh dressing and, at the end of four or five days, instead of finding sloughs filling the passages, swelling and stenosis, the tissues appear shrunken and mummified, and the strait is clear Unless the electrode has been allowed to cool before removing, no hemorrhage or only slight oozing occurs There is also less discomfort following this method than after others The cotton should not be saturated to dripping with the solution, so as *to allow it to trickle down into the throat, and if too* much is used, it occasions a copious serous secretion Advantage of this power of the strong solution to cause stimulation of the glands, and osmosis, can be taken in *treating ozena* and dry catarrh of the nose and throat The weak solutions diminish secretions, the strong ones increase them

Much suffering can be prevented in people who take cold easily, by using the pocket camphor-menthol inhaler Any one can easily construct it I have *them made, however,* with an excess of camphor, while the pure camphor-menthol contains a larger proportion of menthol By inhaling this for a moment, the instant the irritation of a cold is felt in *the* nose or throat, the attack can be stopped Patients who carry these inhalers in their pockets are able to prevent colds during the seasons when they have heretofore suffered repeatedly

In my first paper on this subject, I gave the directions for preparing this formula, but I have since come to prefer a preparation that is made more cheaply and elegantly for me by Truax, Greene & Co , of Chicago

Columbus Memorial Building

CLINICAL VALUE OF THE CHEMIC ANALYSIS OF GASTRIC JUICE

BY B BECKER, M D

TOLEDO OHIO

Professor Bourget, at Lausanne, being looked upon as authority on all questions concerning the chemistry of the stomach, was invited by the organizing committee of the French Congress for Medicine at Lyon, to give a full report of the named question The result of his experience, gathered during a number of years from 354 patients, differs in many respects from the views of many physicians at the present *time, and* a sketch of his resumes must be of interest to the readers of the Journal

Bourget examines the contents of the stomachs of his patients before breakfast, and after a test meal of 200 cubic centimeters of beef tea, 80 grams of chopped meat and 40 grams of bread After two and one-half hours of digestion, the *stomach* is emptied by the stomach tube, without aspiration, simply by the contraction of the muscles of the stomach, which under certain conditions is promoted by the insufflation of a small quantity of air Having emptied in this manner the larger amount of the contents of the stomach, he pours 100 cubic centimeters of water into the organ and empties the same immediately after By the analysis of the diluted, as well as the undiluted fluid, an exact measuring of the quantity of the contents of the stomach at the time of the experiment is possible Beside this, an analysis of the acidity *in toto*, of the amount of free as well as combined hydrochloric acid, of organic acids, etc , is made For the examination of the total acidity with one-tenth strength of the normal caustic soda, Bourget prefers azolithmin to phenolphtalein, which is mostly used as an indicator, because the latter is unreliable in the presence of peptones The relation of the acidity of the undiluted to the diluted gastric juice allows the correct estimation of the absolute quantity of acids For the qualitative analysis of free acid, Bourget uses phloroglucin-vanillin or Boas' resorcin test, while for the quantitative HCl test he usually uses the method of Hazen and Winter

In young individuals with healthy stomachs, free hydrochloric acid is *always* present Even after a meal of 300 grams of meat, a percentage of 0 03 to 0 05 of free hydrochloric acid is found, while the quantity of combined hydrochloric acid fluctuates between 0 20 to 0 25 per cent This gives the impression that the healthy mucous membrane of the stomach has the power to secrete such a quantity of this acid which is in proportion to the amount of nourishment, and that after the saturation of the bases and albuminates, a certain excess of free acid remains

In all diseased conditions, which lower the activity of nutrition, as chlorosis, anemia, chronic nephritis, etc. the quantity of HCl is diminished In chlorosis and anemia, free hydrochloric acid is often entirely absent In neurasthenia great fluctuations are observed, the same patient can have hyperchlorhydria on one day and on the next day he may produce a distinctly hypochlorhydric gastric juice, according to his momentary mental disposition During the periods of depression, the quantity of hydrochloric acid is usually diminished In cases of gastrectasis and gastroptosis, the secretion of HCl seems to depend on the motility of the stomach As long as the stomach is emptied in the normal way, the condition of the gastric juice is almost normal, even in well marked dislocations of the organ If, on the other hand, the motility of the stomach is insufficient, the juice is also altered by-and-by, free hydrochloric acid disappears first, while the percentage of combined acid diminishes later on

For some time it was thought that in malign tumors of the stomach especially in carcinoma, the absence of free hydrochloric acid was almost a pathognomonic symptom of this disease That this in fact is not the case is proved by the observations of Bourget, who found free hydrochloric acid in nine cases out of twenty-five of carcinoma of the stomach

Hypochlorhydria is found in a large number of cases of dyspeptic trouble, which are usually described under the general name of gastritis The quantity of free, as well as combined HCl, is increased, a quantity of 0 18 per cent of free and of 0 26 per cent of combined acid is not rarely found In Reichmann's disease (continued hyper-secretion of gastric juice) the relative quantity, of hydrochloric acid can be normal, or hypochlorhydria may exist, while in all such cases the total quantity of the acid is rather large In one patient of this kind, Bourget found, for instance, after the test meal, 18 grams of concentrated HCl, with a specific gravity of 1016, diluted in two quarts of gastric juice which had gathered in the stomach after the test meal

There is always found a sufficient quantity of pepsin in any gastric juice, even in advanced cases of carcinoma the peptic power of the gastric juice is always sufficient It was only in two cases of atrophy of the mucous membrane of the stomach that Bourget could observe the absence of pepsin in the juice. The mercantile preparations of pepsin show a very high digestive power in the chemic test tube, but after the addition of pepsin to the physiologic gastric juice the digestive power of the latter is largely diminished, about one-half after the addition of 0 5 per cent of pepsin

Lactic acid is found in those cases where the contents of the stomach remain for a long time in this organ, especially when at the same time hypochlorhydria exists This is often the case in carcinoma Butyric and acetic acids are formed under similar conditions The latter is often formed in Reichmann's disease, because different kinds of fungi of fermentation can very well exist in a 2 per cent solution of hydrochloric acid

Now then, what is the clinical value of the chemic analysis of gastric juice? Admitted that it gives some valuable information, we can not form a definite conclusion by it as to the activity of the stomach during digestion It considers only one side of the question and leaves three points entirely untouched, which are of the greatest importance for the act of digestion

1 The permanent secretion of gastric juice during the whole time of digestion

2 The absorption by the mucous membrane of the stomach

3 The emptying of the stomach into the intestine

Furthermore, we are not allowed to judge as to digestion in general from the energy of the digestion of the stomach The digestion of the stomach does not represent more, in a certain sense, than a preparation for intestinal digestion The latter can be entirely sufficient to support life, while the digestive power of the stomach is impaired The peptones which are formed in the stomach are not ready yet for assimilation according to the views of Bourget After the subcutaneous or intravenous injection of peptones formed by the stomach, it was observed that they were eliminated by the urine, and plain symptoms of intoxication were found during this process If, however, these gastric peptones had been brought in contact with intestinal juice for some length of time, no symptoms of intoxication were observed after their injection, and no peptones were found in the urine

We also should be careful in our diagnostic conclusions from the chemic analysis of gastric juice A positive diagnosis of Reichmann's disease only can be made by this analysis In all other affections, especially in the different forms of gastritis, the chemistry of the stomach is so changeable that upon this alone no positive opinion should be based In one and the same disease, at certain times, hyperacidity is found, at other times hypoacidity, and again at other times, normal conditions are observed Sometimes, during the course of the same disease, the result of the chemic tests changes entirely—a primary hyperchlorhydria turning into hypochlorhydria This goes to show that chemic analysis alone does not justify a positive diagnosis of disorders of the stomach An examination of the motory action of the organ should never be omitted, because we can draw better conclusions by it as to the general disorders of digestion than by chemic examination only In consequence of this, a classification of the diseases of the stomach based on the chemic test alone, should not be made The most important value of the chemic analysis of gastric juice is that it serves as a guide in therapeutic procedures We will base on it our dietary and medicinal treatment, knowing if hydrochloric acid or alkalins are indicated in a given case

Beside the observation of the chemic and motor *activity of the stomach, the estimation of the position* and size of the organ should never be forgotten To this end, Bourget recommends insufflation of the stomach Air is blown into the stomach until the patient perceives a certain sensation of pain, which will set in as soon as the stomach has reached the limit of its normal expansibility A flabby belly exposes the border of the stomach to the eyesight directly, and it can be marked with a blue pencil, while in a tense and fatty abdominal wall the demarkation has to be *made out* by *percussion* The quantity of the insufflated air indicates the size of the organ A healthy stomach usually reacts after the insufflation of fifteen to eighteen hundred cubic centimeters of air, while in certain diseases it may receive as much as five quarts before the limit of the expansibility is *reached* In this way we can easily differentiate between an ordinary dilatation of the stomach and gastroptosis, vertical dislocation etc

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ERRORS OF REFRACTION

A SYLLABUS OF THE LECTURE DELIVERED IN THE JANUARY EVENING COURSE TO THE PHYSICIANS OF THE SPECIAL OPHTHALMOLOGIC CLASS AT THE POST-GRADUATE MEDICAL SCHOOL.

BY FRANCES DICKINSON, M D

CHICAGO

These eighteen propositions will assist the beginner to more readily understand the many pages treating of the same subjects in all our text-books

With a second lecture on the lenses which correct the errors of refraction, and a third lecture on the frames which hold the lenses which correct the errors of refraction, we will have completed the "House that Jack Built"

1 Three essentials to sight—Light, eye, brain

2 Three characteristics of light, it proceeds—From every point, in every *direction*, *along* straight lines called *Rays*

3 Three directions to rays of light—Parallel, divergent, convergent

4 Three destinies for light—Absorbed, reflected, refracted

5 Three *varieties* of forms of glass reflect light—Plane, prism, curved surfaces

6 Three combinations of curved surfaces converge rays of light—Convex spherical, convex cylindrical, convex sphero cylindrical

7 Three combinations of curved surfaces diverge rays of light—Concave spherical, concave cylindrical, concave sphero cylindrical

8 Three refracting surfaces in the eye—Anterior surface of cornea, anterior surface of lens, anterior surface of vitreous

9 The combined effect of the three refractive surfaces of the eye on the rays of light, be they parallel, divergent or convergent rays is to—Converge the rays, converge the rays alike in every *meridian*, converge the rays to a point focus, as would a convex spherical lens

10 Three positions for the foci of all rays of light entering a convex spherical lens, *i e*, at, before, and behind the principal focus, or—Entering parallel rays are focused at the principal focus, entering converging rays are focused before the principal focus, entering diverging rays are focused behind the principal focus

11 Three directions given to rays of light emerging from a convex spherical lens, *i e*, parallel, diverging and converging, or—Parallel emerging rays *when proceeding from the principal focus*, diverging emerging rays when proceeding from a point before the principal focus, converging emerging rays when proceeding from a point behind the principal focus

12 Three positions for the foci of all rays of light entering the normal refractive media of the eye, making three possible positions for the retina—Entering parallel rays are focused at the principal focus of the refractive media of the eye or on an emmetropic retina, entering converging rays are focused before the *principal focus of the refractive media* of the eye, or on a hyperopic retina, entering diverging rays are focused behind the principal focus of the refractive media of the eye, or on a myopic retina

13 Three directions given to light emerging from the normal refractive media of the eye—Parallel emerging rays when proceeding from the emmetropic retina, *diverging emerging rays when proceeding* from the hyperopic retina, converging emerging rays when proceeding from the myopic retina

14 Three varieties of meridional or curvature refraction of the refractive media of the eye—Every meridian or curvature may refract alike, the two principal meridians (any two meridians at right angles to each other) may refract unequally, regular astigmatism, different parts of the same meridian may refract unequally, irregular astigmatism

15 Three conditions of the eye refract alike in every meridian or curvature—Emmetropia, hypermetropia, myopia

16 Three varieties of regular astigmatism—One meridian may be emmetropic, the other hyperopic or myopic, simple astigmatism, both meridians may be hyperopic, one more so than the other, or both myopic, one more so than the other, compound astigmatism, one meridian may be hyperopic and the other myopic, mixed astigmatism

17 Three varieties of irregular astigmatism—When the meridians of greatest and least curvature or refraction are not at right angles to each other, when the cornea is conical when different parts of the same meridian refract unequally

18 Three refractive abnormalities—Axial myopia or hyperopia—antero-posterior diameter too long or too short, curvature myopia or hyperopia—curvature too great or too little, index myopia or hyperopia—refracting power of media too great or too feeble

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ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER 1854-1894

BY JOSEPH JONES, M D, LL.D

NEW ORLEANS LA

(Continued from page 633)

CHAPTER X

BLACK VOMIT OF YELLOW FEVER

The following observations on the black vomit of yellow fever, are the results of labors begun in 1856, and pursued, in various portions of the Southern States, up to the present time

I have shown, by numerous careful post-mortem examinations, and by analysis of the blood, black vomit, and urine during life, in various stages of the disease, that

During the active stages of yellow fever, profound changes take place in the organs and tissues, and especially in the kidneys, heart and liver, and oil and granular fibrinous or fibroid matters (altered albumin and fibrin), transude through the capillaries and fill up the cells and excretory ducts, and arrest or impair the functions of these organs

The liver of yellow fever does not present the soft friable condition characteristic of true fatty degeneration The jaundice resulting from the suppression of the excretory function of the liver, would appear to be due to the same causes which induced the suppression of urine, namely, to the deposit of oil and fibrinous matters in the excretory structures of the kidney and liver

The heart, in yellow fever, appears to be as fully permeated with oil as the liver, in the latter organ, however, a large amount of the oil is inclosed within the liver cells

Yellow fever is not only attended with what might be called "acute fatty degeneration," but also with such profound alterations of the fibroid elements of the blood as to permit the transudation of the altered fibrin and albumin, through the walls of the capillaries, into the excretory tubes

Black Vomit—This ejection of altered blood from the mucous membrane of the stomach, during the period of calm or depression, although not absolutely characteristic of yellow fever, as it may occur in other diseases, is still of so frequent occurrence in yellow fever as to demand the most careful consideration, both as to its nature and origin

The character of the matters vomited during the progress of yellow fever varies in different stages of the disease, and with the character, relative mildness and severity, and the progress of the changes in the blood and organs

While yellow fever is characterized, in common with several other diseased states, by an irritation of the gastric mucous membrane, the peculiar nature of the vomited matters does not rest entirely upon the congestion and irritation of the mucous membrane of the stomach, but is influenced to a greater or less extent by the changes of the blood, liver, kidneys and nervous system

The vomiting in yellow fever may also be regarded, to a certain extent, as salutary, and as an effort for the elimination of certain excrementitious materials from the blood In some cases, the first effects of the black vomit may seem to be salutary, the tongue improves in appearance, the febrile heat abates, and if it were not for other profound changes in the blood, liver and kidneys, lying back, as it were, of this almost universally fatal symptom, beneficial results of the most important character might flow from the relief afforded by the removal of a certain amount of excrementitious matter, as urea and ammonia from the blood

The first ejections of the stomach of a yellow fever patient consist most generally of the ordinary secretions and contents of the stomach, then follow vomiting of a mucoid fluid, frequently at first tinged with bile, the reaction of which varies in different cases, being alkalin in some and acid in others

After the first vomiting the stomach may remain tolerably quiet until the subsidence of the fever on the third or fourth day, when, without any premonitory symptom of nausea, the stomach, on any trifling provocation, may eject a quantity of clear, pale, almost limpid and slightly acid, opalescent fluid At this period the disease may terminate, or make no farther progress, as if this elimination was similar to the perspiration of intermittent fever, the whole ailment vanishing at this stage If the vomiting continues and passes on to black vomit, it becomes first streaked with dark flocculi of altered blood, the reaction, in many cases, changes from the acid to the alkalin, and careful chemic examinations have convinced me that this change in the reaction of the black vomit was due to the elimination by the gastric mucous membrane of urea, and its conversion into ammonia

The acid reaction of the yellow fever vomit is due not to the presence of any peculiar acid, but to several, as the phosphoric acid, existing in the form of acid phosphates, acetic and hydrochloric acids The degree of the acidity will also vary with the character of the fluids and solids taken into the stomach; thus, if much sugar be taken, the vomited matters will be much more strongly acid, and the presence of this substance will also determine, to a great extent, the presence and development of certain fungi, as the yeast-plant

The rapid generation of torulæ, as well as the effervescence of the black vomit, in certain cases, is referable chiefly to the presence of sugar in the aliment, and in the tea and coffee drank

I have observed various forms of coniomycetous fungi in the black vomit of yellow fever, but I have by parallel experiments, and microscopic examinations of urine and various other organic liquids, failed to find any distinct species characteristic of yellow fever If the black vomit be allowed to stand for days and weeks, and be carefully examined at intervals with the microscope, we see various forms of the coniomycetous fungi, as torula, sacchari or cerevisiæ, cryptococcus, and penicillium glaucum, and of the hyphomycetous fungi, as oidium lactis, and oidium albicans, and of the physomycetous fungi (mucor), and of the torulaci Upon one occasion, during these investigations, I submitted one of these fungi from the black vomit of yellow fever to the observation of an excellent microscopist of this city, Mr Kinttschmitt, and the following is his reply

New Orleans, Nov 10, 1873

My Dear Sir—I have subjected the filtrate from black vomit, which you recently placed at my disposal, to a very careful microscopic examination and comparison with other fungoid growths, of which I have several prepared slides in my possession

The fungoid growth developing in the filtrate of black vomit has certain points in common with torula, oidium and mucor, and if torula be a submerged form of penicillium, also to the latter fungus, it also resembles the filamentous development of bacteria, the same as the fungoid growths developing in a solution of gamboge The diagram which Virchow furnishes of the aspergillus fungus discovered by him in the human lung, has a strong likeness to the black vomit fungus

There is a doubt, however, in my mind, that yellow fever is not produced by a specific fungus, but the fungus, if produced in the human body at all, is produced by the sickness itself, but it is most likely that the fungoid growth only makes its appearance after the vomit has been ejected from the stomach

The slides on which the foregoing remarks are based, had been prepared on 2d inst On examining them again yester-

day, the fungus has in a measure disappeared and granular masses seem to have taken its place I remain, my dear sir, very respectfully,
P KINTTSCHMITT

The specific gravity of black vomit, as determined by weighing, with the specific gravity bottled, varies from near the standard of distilled water to near that of blood

It is now fully admitted that black vomit is not entirely confined to yellow fever, and that it is chiefly the secretion of the mucous membrane of the stomach, and the matters introduced from without as food, mingled with the blood which oozes slowly into this viscus, from the mucous surfaces denuded of mucous epithelium

But in most cases, black vomit is something more, it is to a certain extent an excrementitious product, containing urea and carbonate of ammonia

The kidneys are more or less affected in every case of yellow fever, when they act continuously and freely, the blood is freed of bile and urea, and black vomit more rarely occurs than in those cases in which their functions are arrested, and the mucous membrane of the stomach assumes the excretory function

Black vomit is due to several causes

1 To the direct irritation and structural alteration of the gastric mucous membrane, by the poison of yellow fever This poison is most probably received into the blood and acts in this manner, or through this medium upon the gastric mucous membrane, for we find cotemporaneous changes taking place in the heart, liver and kidneys, and these changes would most probably succeed the gastric irritation, if the poison was received in food or drink, primarily by the stomach

2 To the structural alterations of the blood, and especially to the marked diminution of the fibrinous element, which appears to sink to a lower figure than in any other known diseased state It is well known that the diminution of the fibrinous element, below a certain standard of health, so deranges the capillary circulation as to lead to congestion, alteration of nutrition and secretion, and passive hemorrhages The hemorrhages and effusions of scurvy can only be referred, with reason, to the changes of the blood, and especially of the fibrin

3 To suppression of the action of the kidneys, and retention in the blood of urea and other excrementitious products, and the elimination of urea, and carbonate of ammonia and ammonia, by the gastro-intestinal mucous membrane

4 To the direct irritant action of the ammonia, and excrementitious materials eliminated vicariously, upon the mucous membrane of the stomach and intestines

Bernard and Frerichs long since explained, by experiments, what we observe in those cases of yellow fever attended with urinary suppression Thus the former experimenter found that a dog, which had a fistulous opening in the stomach, passed daily with his urine about 93 grains of urea and uric acid, and yet during the succeeding twenty-four hours after the removal of the kidneys, the blood drawn from this animal exhibited only a mere trace of these constituents, but urea in abundance was detected in the gastric juice withdrawn through the fistula, and after remaining for some time in the stomach and intestine, the urea changed into ammoniacal salts, and the gastric juice was secreted continuously and not, as in the normal condition, only after a meal Not only were the manner of formation and chemic constitution of the secretion of gastric juice altered by this vicarious excretion of the main constituent of the urine, but the mucous membrane was structurally altered, and became disqualified not only for the performance of this eliminative action, but also for the elaboration of its normal secretion

In yellow fever, the suppression of the action of the kidneys follows immediately after, or may even begin in the midst of a devastating fever, attended with repeated alteration and chemic change of the elements of the blood, and the formation of large amounts of urea and other excrementitious matters, and the work suddenly thrown upon the already weakened and altered stomach is far greater than when the kidneys are amputated in a healthy dog, or when their sudden suppression is from the action of cold Bidder and Schmidt have shown that the digestive powers of the gastric juice are weakened, if it be mixed with any considerable quantity of saliva, in consequence, as they suppose, of the neutralization of the free acid by the alkali of the saliva, and they also found that the addition of bile to the normal gastric juice entirely suspended its digestive property, although the mixture still exhibited an acid reaction Bernard, Bidder and Schmidt found that gastric juice, secreted with urea, sooner or later not only became alkalin, but also lost its power of converting albuminous matters into assimilable forms, and Lehman also found that the digestive power of the gastric juice was much impaired by the addition of alkalin salts, or by saturating the fluid with peptones or other organic substances, either nitrogenous or non-nitrogenous

In yellow fever, when there is an impairment or suppression of the function of the kidneys, we not only have a combination of these various causes, producing derangement of the gastric juice, but we also have the destruction of the fibrin of the blood, inducing passive hemorrhages from the congested and altered gastric mucous membrane, and at the same time such an elevation of temperature as is most favorable to the rapid decomposition of the contents of the enfeebled stomach and intestines

5 To the irritant and nauseating effects of the bile retained in the blood The bile retained in the blood, without doubt produces its characteristic effects upon the nerves supplying the stomach, producing nausea and vomiting

6 To the degeneration of the excretory and secretory cells of the gastro-intestinal mucous membrane, attended with or characterized by the deposit of granular fibroid or albuminous matters and oil globules in the secreting cells, and in the walls of the smaller blood vessels or capillaries

7 To the capillary congestion of the gastro-intestinal mucous membrane, similar in all respects to the intense capillary congestion which characterizes all the organs and tissues in this fever

The chief causes of black vomit therefore are the direct irritation of the gastric mucous membrane, intense capillary congestion, in consequence of the morbific action of the poison of yellow fever, and its products, upon the vasomotor system of nerves, suppression of the functions of the liver and kidneys, and the retention in the blood of bile and urea, and the elimination of urea from the gastro-mucous membrane, as such, and in the state of ammonia and carbonate of ammonia, and the direct irritant and solvent effects of ammonia and carbonate of ammonia, upon the gastro-intestinal mucous membrane and the effects of the urea, ammonia, and other constituents of the metamorphosis of the tissues upon the blood, the alterations of this fluid by the changes excited by the yellow fever poison, and the destruction and alteration of the fibrinous element

When careful sections of the kidneys were made with Valentin's knife and examined under the microscope, the Malpighian corpuscles and tubuli uriniferi were filled with oil globules and granular fibroid matters, which appeared to be modifications of fibrin and albumin The excretory cells of the kidneys also contained oil globules and granular matter

The poison of yellow fever appears to act in an analogous manner to the agent producing smallpox, or the poison of certain reptiles, which alter the constitution of the blood, and lead to the formation of altered albuminous and fibrinous products from the blood, and which in the case of yellow fever transude into the hepatic ducts and urinary tubes, and thus cause suppression of the urinary and biliary secretions

When in any case of yellow fever the function of the kidneys is arrested, a fatal result necessarily ensues, not only from the retention of the urinary constituents, but also from the retention of the bile

As long as the kidneys perform their normal function, the retained bile will be continuously eliminated, but as soon as these organs cease to act, the bile, as well as the urinary excretion, is retained in the blood, and certain nervous disturbances are induced, as dullness of the intellect, uremic convulsions, and in some cases violent agitation of the muscles resembling tetanic spasms

Black vomit, therefore, is an *effect* or *result* of preceding actions or changes, and is not a cause, it is an error therefore to search, either by chemic means or by the microscope for the *cause* of the disease in one of its *products*

Black vomit, from its great amount, may be one of the causes of death, but as it is, in many cases at least, the result of an effort on the part of the living organism to eliminate certain materials from the blood, it may be to a certain extent salutary, but it is in all cases, only secondary to the preceding changes in the blood, heart, liver and kidneys

In the preceding chapters we have given the practical results of the microscopic and chemic examinations of the black vomit in various stages of yellow fever, similar facts will also be presented in the succeeding chapter on the changes of the urine, the following cases are presented in this connection as direct demonstrations of the generalizations just recorded

Case 1—Yellow fever, jaundice, suppression of urine, black vomit, death G G, age 22, laborer, native of Canada Entered Charity Hospital Oct 18, 1873 Attacked with yellow fever October 14 Has been driving a street car, and has resided on Napoleon Avenue near the Mississippi River, in one of the so-called infected districts Has resided in New Orleans four years, states that his attack began with "universal pain all over the body," which was greatest in the forehead and lumbar region Fever began with chilly sensations October 18, evening, has just entered the hospital This is the fourth day of the disease Pulse 100, respiration 30, temperature of axilla 105 5 F Tongue very red at tip and edges, and coated with yellow fur in the center Conjunctiva yellow and congested Surface of the entire body yellow, with marked capillary congestion Gums red No appetite Body emits a disagreeable odor Patient restless and nervous, and although answering questions slowly appears to be in an unnatural state Complains of pains in all parts of his body

October 19, 8 A M, tongue very red at tip and edges and furred in center Gums very red Conjunctiva of eyes congested and yellow, body deeply jaundiced, with great peripheral capillary congestion Eyes have a wild restless expression Stools light colored Patient has passed no urine and his bladder is not distended, Restless, uneasy, sleepless, with great mental hebetude and confusion Pulse 90, respiration 26, temperature of axilla 103 10 8 P M, intellect confused and stupid, tongue red at tip and edges Patient very restless, tries to get out of bed incessantly and says that he wishes to go home Face expressive of sorrow and grief No urine has been obtained during the night or day, complete suppression Pulse 90, respiration 26, temperature of axilla 102 Black vomit runs from corners of the mouth and appears to regurgitate from the stomach without any effort on the part of the patient, who continued very restless during the night and died at 6 30 A M, October 20 Black vomit continued to run out of his mouth up to the time of death

Autopsy, at 9 A M, October 20, three hours after death Exterior of body still warm The warmth was diffused over the entire body Face and limbs full and round Surface of skin greenish-yellow, dependent portions of neck, face, trunk and extremities mottled Black vomit running in streams from both corners of the mouth When the body was turned on its side in placing it on the table, a considerable amount of dark blood or black vomit poured out of the mouth The ease which the black vomit poured out of the mouth indicated great relaxation of the muscular coats of the esophagus and stomach Immediately after opening the thorax, I introduced the bulb of a delicate thermometer into the right ventricle of the heart, and found the temperature to be 100 5 F It is not probable that any great degree of heat had been lost during the short period of time which had elapsed after death Dependent portions of lungs congested, otherwise normal Muscular structures of heart apparently greatly congested, giving the surface of the organ a deep color, as in malarial fever, but when the walls of the heart were cut through and the organ carefully washed under a stream of water the muscular structures presented the characteristic yellow color of yellow fever Muscles of heart softened and readily crushed under the fingers Under the microscope the muscular fibrillæ of the heart were found to contain numerous oil globules and much yellow granular matter, the oil and granular matter were, however, not so abundant as in cases in which death took place at a later stage Cavities of heart distended with dark liquid blood, also a small golden colored fibrous clot Stomach distended with about one quart of dark, grumous, fluid black blood, or black vomit Mucous membrane of stomach greatly congested and mottled, presenting deep purplish spots or ecchymoses, and from these portions the black vomit appears to have flowed from the congested and ruptured blood vessels Small intestines contained blood

The liver was congested, presenting a dark mottled appearance on the surface, many yellow lobuli, however, were readily discerned upon the surface, resembling in all respects the yellow color of the liver in yellow fever The congestion of the capillaries of the liver was so great, however, that the organ presented more nearly the hue of some recent fatal cases of malarial fever When thin sections of the liver were made, and the excess of blood gently pressed out and the slices washed under a stream of water, the color resembled in all respects that of yellow fever Liver loaded with oil globules and yellow granular matter Liver cells contained oil globules and were of a distinct yellow color

When the great excess of blood with which the kidneys were congested was washed away, these organs presented the usual color of yellow fever Sections with Valentin's knife, viewed under the microscope revealed the Malpighian corpuscles and tubuli *uriniferi, filled with detached cells, oil globules and yellow* granular matter The urinary bladder contained about two fluid ounces of urine, which represented the amount excreted during the last thirty-six hours of life Detected no coloring matter of bile in urine Acid reaction Slightly turbid Light yellow color Urine contained albumin, urinary cells from excretory tubes and from pelvis of kidney, and casts of tubuli uriniferi Examination of black vomit from the stomach Reaction acid, contained numerous colored blood corpuscles, masses of hematin, oil globules, granular matter, cells from mucous membrane, casts of gastric glands, and broken capillaries Sp gr 1016 7 Upon careful analysis, the black vomit contained urea and ammonia, acetic and hydro chloric acid No hydrocyanic acid was present The hydrochloric acid loses to a certain extent, for it could be driven off by heating the black vomit gently in a beaker *on the sand bath*, and its fumes reddened litmus blue, and decomposed nitrate of silver When thrown upon a filter, the filtrate presented a brownish red yellow color Sp gr of filtrate of black vomit 1013 2 When the filtrate of the black vomit was treated with nitric acid the albumin coagulated, but the coagulum re-dissolved in boiling I was unable to detect the biliary coloring matter in the filtrate of the black vomit Alcohol added to the filtrate coagulated the albumin Sp gr of black vomit 1016 7 Sp gr of filtrate from black vomit after removal of blood corpuscles and organized bodies 1013 2

Solid residue in 1000 parts of black vomit	56 15
" " " " " " filtrate from black vomit	46 60
Hematin, blood *corpuscles and organized* elements in 1000 *parts of black* vomit	9 55

When the filtered liquid from the black vomit was set aside, a delicate fungoid plant resembling the torula was developed This delicate fungus had certain points in common with torula, oidium or mucor, and if *torula be a form of* penesedium, also to the latter fungus It also resembles the filamentous development of bacteria A similar fungus has been observed *developing* in gamboge

(To be continued)

PRE-COLUMBIAN LEPROSY

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(Continued from page 626)

Dr Manuel A Muniz, of Lima, Peru, in the *Cronica Medica* of 1886, contributes an article entitled, " La Lepra en el Peru " His notes were taken from the Historical Discourse *on the* Foundation and Rights of the Hospital San Lazaro, Lima, by Bravo *de* Lagunas, published in Lima, 1761 This work is in the library of Santiago de Chile *Dr* Lagunas shows the first royal ordinance for the care of lepers and for the foundation of a hospital was made in the time of Charles III *In 1693, the alms were ordered to be* used for the support of a hospital for Indians Finally, Philip II prescribes that such sick persons as are afflicted with contagious diseases be carried to elevated localities, from which no defiled wind having *passed the hospitals, can flow down and reach the* healthy population of the lowlands

Dr Muniz mentions the first leper hospital at Lima, built by Anton Sanchez, a citizen of that place in 1563 *In 1606, according to the same authority, Lima* was full of lepers, and those unfortunate persons were too much for San Lazaro, they were admitted elsewhere, and many of *them died unknown and* without assistance, even without the sacrament Fear was expressed lest the infection should spread over the whole country, and the successors of Sanchez took care that all lepers should be received in their enlarged hospitals, which consisted of *three houses*, *one for men, one for women*, one for negroes All lepers to be received, unless they were slaves As to the latter, their master was bound to take care of them during the first year It is said that these masters used to evade this obligation, by antedating the outbreak of the disease These buildings are to-day tenement houses, having outlived the terrible scourge against which they had been built In 1639, the chronicler Cobo mentions the hospital San Lazaro, slightingly, saying that it was very poor, and little resorted to, which proves that the disease had already broken its wings Bravo de Lagunas corrects the error of Echave, who states that San Lazaro was *founded for negroes "All free* persons, suffering from San Lazaro's evil, whatever their social position, condition, sex or age, are received in it," which shows, *according to Dr Muniz*, how ill informed was the author of the book, entitled the " Star of Lima," (or Description Sacro-political of the Beauties of the City of Lima, published at Amberes in 1688), when he said that the *hospital of* San Lazaro was built for negroes, and also Melandez, who says that, failing patients of that color, the hospital would have been empty, if it had not been made into a common sick-house for the falling evil, because the south wind with the cold dryness of the Andes, loses its poisonous qualities, and rather sub dues than corrupts the humors Bravo de Lagunas gives a number of reasons, and quotes authorities to invalidate this testimony *From 1700 till October* 1746, this leper hospital was financially successful *Then came the earthquake* which destroyed Callao, and partly Lima, and not one stone of the leper hospital was left standing upon another For over six years the lepers had *to* live in ill made cabins or miserable huts In 1758 the new leper hospital was inaugurated, the money for this purpose had been *obtained by lottery* In 1822 the hospital of incurables and that of lepers, were made one The old leper asylum was converted into a school, and afterward into barracks

Lagunas tells us that physicians generally assume as a cause of leprosy in those countries, contrary hu*mors* which destroy the skin, and are much fostered by bad food, depraved constitution, hot air, uncleanness, slovenliness in places of habitation "Others who *believe* in the vermicular system, see the cause of cutaneous diseases and pestilences in small insects, imperceptible gnats which penetrate into the *body through the* skin, assign this same cause to leprosy These animalcules stick to the garments, walls and even stones In this manner, they account for its contagious nature, the *insects or* seeds pass into other bodies from the air, or *by contact* with those parts to which they are attached" Here we have then, the embryo of bacteriology in 1761!

I quote further from Lagunas "A doctrine in which all eminent physicians agree, and which is also favored by the priests, is that scabies, psora and leprosy only differ in degree Scabies consists in small pustules which disfigure the skin In psora, a pernicious itch is added, and if these symptoms are aggravated or extend to the internal parts we have leprosy" Muniz says, however, that they carefully differentiated leprosy and the gallico

An early law in Lima prescribed that parties of recently introduced negroes should be stopped at a distance of at least one league, before entering the city, and should remain in quarantine until the chapter had satisfied themselves that they were free from contagious diseases, and the city went to the trouble of building houses in the suburbs, on the banks of the river, where the quarantined people could temporarily stay, till they were sold and spread over the country "It was the same theory of contagion," says Muniz, "which obliged all lepers to use no speech in asking alms, but to make use of bells and wooden timbrels" Evidently the negroes were suspected as a leper importing element

In the middle of the last century, the leprosy of an illustrious prebendary of the Cathedral of Lima caused a famous litigation

In 1761, Lagunas says, that "it has been observed in the hospital of San Lazaro, in Lima, that as far back as memory reaches, four persons have been in immediate attendance upon the patients, and never did any of them catch the disease In this hospital there is now a young woman with furfuraceous leprosy, two patients covered with purulent tumors and who scarcely present human shape, and several others just as wretched, though with smaller deformity There are others with feet and legs full of scabs, and almost as thick as the body, who in every other respect seem to be well, and have done for many years such services as they were able to perform There are some whose articulations have given way, or whose fingers have fallen off, and there is another whose foot detached itself altogether, and who walks and stumps along like a trunk There is a leper whose voice is so raucous, that it reminds you of the snarling of a dog, or of some other moaning animal"

Muniz quotes from Parra, "a Colombian physician, as unfortunate as he was intelligent," who suffered from the terrible effect of the disease, and described in eloquent and graphical pages its pains, its torments—(Ricardo Parra, of Bogota, Colombia, his work was entitled "La Lepra," and was published in 1850-1860) "The first notable Spaniard who caught leprosy, was one of the conquerors, Gonzalo Jimenes de Quesada, he died of it There is no doubt that he contracted the disease through contagion, and that therefore leprosy must have been here before the Conquest In America its resort of predilection was ancient Colombia, it never gained much of a foothold in Peru"

I shall quote Parra at some length to give a clear idea of his etiologic theory "Elephantiasis is a radical and constitutional asthenia, which tends toward partial gangrene It is not only a nervous asthenia, it is asthenia of all the elements, organs and functions" Parra nearly forty years ago had an intuition of the microbe "I shall show," says he, "how an impression, whatever its origin, whether from cosmos or microcosmos, from the external world or from the organism itself, how such an impression working on a sensitive nerve interferes fatally with a nervous center, how this nervous center by means of an exodic fiber and of a special nerve apparatus, the vasomotors, acts upon the vascular system, contractible in all its extent, how this reflex action hurts and disturbs that system, causing a beginning of paralysis of atonia and weakness in the play of its power of contraction, how these vessels ceasing to act normally, interfere with the blood circulation, and every kind of circulation, how the impediment in the way of the general circulation, checking the free exchange between blood and tissues, and the free contact between the tissues, and all the fluids and humors of the economy, produces principally three things anemia and asthenia of the nervous centers, anemia and mortification of the tissues, alteration of the composition and even constitution of the blood, and perversion and depravation of all the humors, liquid products, and all the secretions of the organs, how these causes interfere with all the functions of nutrition, how this disease of nutrition in all its functions aggravates and increases the central enervation, how this enervation, already deep-seated, and the perturbations of nutrition, produce general dyscrasia of the humors, and how all these causes together, working and acting, one upon the other, being at the same time causes and effects, engender and produce thousands of abnormal phenomena, which, united with them, in masses, every day increasing with growing and irresistible action, produce successively progressive mortification, slow disorganization, increasing paralysis, and lead finally to extensive phagedena and general gangrene"

Here is another quotation from Parra "The wrinkles, fissures and scabrosities, the fall of the hair, the desquamation, the general debility, the consumption of the muscle between the index and the thumb, the cold, the atrophy of various parts, but especially that of the vertebral column, must be the immediate effects of the disturbance of nutrition in all its functions, interfered with by the constriction of the terminal extremity of the arteries and capillaries The turgid countenance, the livid, bluish, ashy or purple color of the face in one form of the disease, and the discoloration of the scalp, the formication and numbness, which are symptoms of myelitis, in the other form, the feeble pulse, slow and heavy, which seems to beat through mud, the inflated, very voluminous veins—all these symptoms of either form must be the natural result of the disturbance of circulation, combined with the disturbance of hematosis and nutrition, cyanosis, black blood, fluid and fibrinless, bluish veins under the tongue, a thick and infiltrated skin, infiltrations of the cellular tissue, edema in various parts, infiltration of the corion, glandular inflation, diseased condition of all the glandulæ, disorders of menstruation, epistaxis, at times frequent, affection of all the mucous membranes, are in tuberculous lepra the result of the combinations of the lesions of blood circulation, and all kinds of circulation, of respiration, hematosis and nutrition And the nutrition perverted and working with a damaged and atonic circulation and corrupt sanguinification, added to cyanosis and swelling of the face and other parts, and to the capricious changes of color, will give us the swelling of the lingual veins, the miliary granulations, the spots, the warts, the tubercles and a thousand other morbid products, and finally the simultaneous affection of these three functions, added to the lesions of sensibility and motility will give us in combination, the curvature of the fingers, the disarticulations, the muscular debility, the numbness, the lancinating pains, the vague pains, arthritic, vertebral, and finally, the osteocopic pains, and all the pains in their terrible reality; they will give us the vacillating gait, the contracted hand, the crook legged walking, the spinal curvature, and in another combination they will give us the jumentous urine, the cottonous skin, the forehead bacon-rubbed, exaggerated or malodorous sweat, and the absolute cessation of transpiration, the abscesses and furuncles, the spots of all size by vascular relaxation, the *knots and horny spots, the tubercles and ulcers*, and in another combination of the same form, all these functions (*danadas*), will give us dyspnea and suffocation, palpitations of the heart, the constriction as with a girdle, the precordial oppression, terrible nightmares, satyriasis, and violent hunger, the thirst and the hydrophobia, the blindness and the photophobia, the libido inexplebilis, and the motiveless rage, the general despondency and unspeakable torment. And all this in consequence of primitive lesions of the circulation and innervation. All this in consequence of the loss of vital energy effected (*herida*) in the nerves, and effected in the blood, effected through the want of oxygen and effected through the want of nervous influx."

I shall give also Parra's description of a leper hospital; it will show the character of leprosy in ancient Peru and Colombia, and the mutilations which Muniz seems to find represented in the *huacos* pottery. "in some, the muscles have become pale, weak and are slowly destroyed; in those who follow, *the articulations* are scooped and excavated, in another the articulation of a foot is detaching itself, in the next the hand is already detached one *entirely shorn of muscles* and arms, has nothing left but a putrid trunk, but death disdains the mutilated trunk, and these wretches just as they are, feed with voracity, digest well, rave and blaspheme, and burning with lascivious fury, get libidinously drunk, and revel in shameful dreams and filthy fancies. Look, finally, at that hundred of monstrous beings, mixed up together, piled up one on top of the other, and wallowing in the dust. Many have no noses, nor lips, nor ears, nor hair; where the face used to be you see now three or four holes. The amygdals have fallen, and they can no longer croak; their noses are stopped and they can no longer breathe through them; larynx, pharynx, esophagus have been devoured, and they can not swallow; some *are mad with hunger*, others devoured by unquenchable thirst. Here are some in whom the raucous roar of the lion has turned to Catilinarian voice and perfect aphonia. In another subject the lungs charged with purulent foci can hardly expand, and here is another whose heart has almost stopped beating. Some weep, others curse, others blaspheme. Others, pusillanimous and craven, tremble and cry for mercy at the least provocation; others laugh danger to scorn, and careless whatever may happen to them, die with stoical indifference. Unceasingly flowing tears and a viscous glutinous humor keeps their red and inflamed eyelids apart, so that many lie blind or grope blindly in the darkness. Many of them have frightful dreams and awake roaring like lions or howling like wolves. The urine of all these men is thick (jumentous) like that of the horse, or clear and raw, as if passed through a filthy filter; there are no sewers more mephitic than their defecations. Some of them lie motionless and entirely paralyzed, and as, at the same time they can neither articulate nor swallow, they are dying of hunger and parched with thirst, not being able to ask for help. All secrete a fetid sanies over the whole body, and breathe an air which they themselves have poisoned. A horrible caries consumes all the articulations and causes the severance of the limbs, which fall off by pieces, the phalanges of the fingers are shaken off and the teeth break forth from their sockets. Some of these trunks talk, demented, mad, they try to sing in their delirium, and their voice is now like the hissing of a snake, and now like the cavernous echo of a tomb. Look, now, at that horrible scene; some of these trunks, formerly men, now masses of rotten flesh, are possessed by libido-inexplebilis, and would like to indulge in pederasty and onanism with other not mutilated wretches, who having fallen into the opposite depravity, feel a horror for the sex, and all that refers to it; but who, devoured by insatiable hunger would like to eat their rotten arms."

Ulloa, in 1797, says: "Leprosy is rather frequent in hot climates; it is unknown in Peruvian highlands. The chief cause of the disease in Peruvian America has been the introduction of African negroes. Muniz mentions that Fray José de la Trinidad took charge in 1822 of the leper hospital which had been united with the incurables, in Lima, and was called del Refugio. With the exception of 1853, when nine persons succumbed to the disease, the average mortality from it was from two to six a year. The "long-bearded and small-cloaked father," as he was called, died in 1878. It is impossible, according to Muniz, to make a reliable statistic record of leprosy in Peru; the registers are few and insufficient. The decrease of the number of cases is a fact. Leprosy has been very hard on the black race. Almost all the ancient inmates were emancipated negroes. The disease affects Indians rarely. From 1870 to 1886, there died in the Refugio five men and five women; four of them Chinese.

Now considering that leprosy has become almost universal in Colombia, and that it has been almost extinguished in Peru, we are led to suppose that in the latter country great care was taken to isolate the lepers, for in no other way could that disease be extinguished. Therefore leprosy must have been rampant there. Such perfect isolation could only result from a great horror of the disease. And if such horror existed, would they be likely to bury with their dead the images of the horrible disease? It may be asserted that the influence of the Church isolated the lepers, so that no feeling of horror is necessary to explain their isolation. But the Incas never were under the influence of the Church, and the Church establishment existed in Colombia to as great an extent as in Peru.

I am inclined to believe that if these *huacos* potteries really represent disease manifestations, they must be of the syphilitic kind. To succumb to syphilis was to be the victim of a disease which was not at the disposition of the poor, who could not pay for the use of many women, and that use was considered as the cause of the disease. They had not in those ancient times any idea that a bacillus must be the cause of the disturbance Therefore to be buried as a syphilitic would probably be an honor, rather than otherwise, in the eyes of the general people, while to be buried as a leper would be quite a different affair Hence we may conclude that if certain deformities are found in ancient burial places, it is more probable, at any rate, that they belong to syphilis rather than to leprosy

In Saladoa, ancient Arizona, considerable pathologic evidence was found by Mr Frank Hamilton Cushing of abscess of the lower jaw and perforation of the alveolar walls In one case, part of the alveolus was lacking, giving to the jaw a very distorted appearance Now these Saladoans have been considered by many archæologists as allied to the Peruvians and the mound-builders of the Mississippi valley on account of their Inca bones Such a deformation would be very similar to what we see in some specimens of *huacos* pottery, and it could be only syphilis, as leprosy has never any effect on the skull The man could not distort the soft tissues of his jaw, the disease must be in the bone

Mr Bandelier, the explorer who sent to New York the *huacos* pottery which I have examined, has his headquarters on the Sacred Island of Lake Titicaca, 13,000 feet above the sea level It was from this island that the original Inca descended to conquer and civilize the barbarous tribes of South America, and to found their capital, Cuzco, four centuries before the arrival of Pizarro, 1000 A D Now on these highlands syphilis had existed among the Aymaras and Quechuas many hundred years before the arrival of the Spaniards Whatever evil these Incas brought along with them, was likely, according to all I have said before, to be syphilis

In ancient Arizona, Mr Frank Hamilton Cushing found some burial places which he calls extra-muros cemeteries, and he thinks they were for some kind of outcast people It would be natural, especially for such persons who know something of the history of leprosy in Europe, to suspect that these places were leprous burial grounds But he infoims me that his examination of many hundred skeletons in the southwestern United States revealed no traces of leprosy among the prehistoric population of America The importance of this statement consists in the special relationship more than plausibly supposed to have existed between ancient Peru and Arizona One of the causes of this plausibility is the presence of llama, guanaco and vicuna representations in clays and in petrographs buried with the dead That animal is supposed to have been extinct (by Mr Bandelier) long previous to the sixteenth century Another is the presence of *bolas* or sling stones, such as are now used in South America in the chase, the tombs furnished only the stones, the sling is only to be found in pictorial form There are also the knotted cords found in sacrificial caves in the mountains surrounding Salado City, which resemble closely the *quipus* or sacred records of the Incas, these knots are the hieroglyphs, or the alphabet of those ancient tribes There is, above all, the predominance among the Arizonians of the Inca bone

Mr Cushing states that he did not find in Los Muertos, one of these places of interment, either hair or cerements or anything that could have escaped destruction for a thousand years, he very naturally concludes from one thousand to two thousand years at least must have elapsed since those corpses were buried there

The absence of any evidence of leprosy in Arizona will make the existence of the disease in pre-Columbian Peru very improbable

(*To be continued*)

SOCIETY PROCEEDINGS

Medical Association of Georgia

Forty sixth Annual Meeting, held in Savannah, April 17, 18 and 19, 1895

First Day—Morning Session

The Association convened at the Armory Hall at 10 A M, and was called to order by the President, Dr Willis F Westmoreland, of Atlanta

Prayer was offered by the Rev Dr Dripps of the Independent Presbyterian Church

Addresses of Welcome were delivered by Mayor Herman Myers and Mr J F B Beckwith, and Dr Frank M Ridley, of LaGrange, responded on behalf of the Association

President Westmoreland then delivered his

ANNUAL ADDRESS

in which he said the Association was nearly half a century old, only a few of the original members remained with us, and each year we noticed that a loved face was absent and learned that an honored friend had passed from our midst to return no more Within the lifetime of the Association, the history of medicine has been revised, the better part of surgery written and every subject pertaining to medicine had widened out under the influence of broader ideas and the greater diffusion of knowledge—empiricism in medicine and surgery had almost disappeared, and that period when a great man's ideas, whether correct or not, was the standard he and his followers had for a guide, had passed away Under modernizing influences scientific methods of research were carried out by trained observers in well-equipped laboratories in every civilized country, and under these careful and patient investigations the misty surroundings of the causation of disease had begun to clear Medicine in its wonderful progress had outgrown the individual capacity of any one and had resulted in an elaborate division of labor and the permanent and beneficial establishment of specialism, able men by using their talent and genius along special lines, by their co operative work had established the solid basis of the medicine and surgery of to day The specialists had to bear the brunt of a great deal of unjust criticism In certain communities they had been censured as a class, when the blame was only merited by individuals Unfortunately, there were medical men who used the broad cloak of specialism to cover the most outrageous charlatanism, and in this respect the field of gynecology presented more rank growths than any other

A few years before the organization of the Association, in the upper portion of the State, there resided a country physician, a representative of that class of honest earnest workers, who from the vicissitudes of fortune had plucked the courage to endure and the inspiration to strive, a man surrounded by pains, care and anxiety, a man who ever proved a friend, comrade, counsellor and guide This physician was Dr Crawford W Long, of Jefferson, Georgia, who by his discovery of anesthesia and his successful use of ether in an operation on March 30, 1842, revolutionized surgery and started it upon its most progressive era

On motion, the Association adjourned to meet in the dancing hall of the De Soto Hotel at 2 30 P M

Afternoon Session

Dr T E Mitchell, of Columbus, contributed a paper entitled

TRAUMATIC WOUNDS OF THE EYE AND THEIR TREATMENT,

which was read by Dr A W Calhoun, in the absence of the author For convenience of description, the author divided wounds of the eye into incised punctured, lacerated, and contused wounds Another classification would be into aseptic and septic wounds So, likewise, we may have a simple, compound, or complicated wound Simple, when the agent producing the wound and any other foreign substance carried by it into the rent is removed, and complicated when any foreign body, whether the missile inflicting the wound or material carried by it remains in the injured member The fundamental principles laid down for treatment of wounds in other parts of the body hold good here 1, the arrest of hemorrhage This will rarely be found troublesome, 2, mitigate any existing shock, 3, cleanse the wound of every vestige of foreign matter, 4, render the wound absolutely aseptic by thorough irrigation with an antiseptic solution—corrosive sublimate 1 2000 5000, 5 coaptation of the severed parts by sutures, if necessary, 6, antiseptic dressing, and 7, position and rest The latter we accomplish with atropia or scopolamin, 2 5 grains to 1 ounce of water, and a light pressure bandage to control the movements of the lids The author then referred to wounds of individual parts of the eye Wounds of the conjunctiva alone are generally caused by some corroding agent, as acids or alkalies, and offer a favorable or unfavorable prognosis depending entirely on the extent of corneal involvement Superficial wounds of the cornea are among the most frequent of accidents, and are caused by the deposition in its structure of small pieces of steel, emery, grains of sand, cinders from a railroad locomotive, etc

As to those cases in which enucleation is indicated, no definite rule can be formulated, since the intelligence, occupation and situation of the patient from the surgeon must be taken into consideration The object of excision is to remove the peril of sympathetic inflammation It is fortunate that sympathetic irritation usually precedes sympathetic inflammation, and serves as a signal for immediate enucleation A wound involving the integrity of the zone of danger, or one in which a foreign body remains in the eye, is the most prolific cause of sympathetic disturbances The consensus of opinion of the best authorities is in accord with the observations of Deutschmann that sympathetic ophthalmitis is of bacterial origin, the microorganisms traveling by continuity of surface beneath the optic nerve sheath, by way of the optic chiasm from the offending eye to the sympathizing member

The prognosis of sympathetic inflammation is very grave The surgeon should not fail to so inform the patient, and if an attempt be made to save the offending eye it should be done only after a thorough understanding of the risk assumed as to sympathetic involvement As a substitute for excision, evisceration and optico-ciliary neurotomy has been advocated and practiced by some, but the consensus of professional opinion still adheres to enucleation as the safest line of procedure

Dr Louis H Jones, of Atlanta, then read a paper entitled

URANALYSIS

The author said that the rapid strides made in physiologic chemistry, and the more general use of the microscope, afforded us means for determining the composition of the urine with great accuracy, and a minimum amount of labor No greater mistake can be made than to assume that the condition of the urine is an index to the state of the kidneys alone Disorders of the brain, the liver, the heart, the stomach, alike tell their tale in altered conditions of the urine The author discussed only the most reliable and simple methods of detecting such changes, and pointed out a few of the sources of error present in some of the methods in common use There are, in making an examination of the urine, four points *usually* determined—namely, reaction, specific gravity, and the presence or absence of albumin and sugar To these should always be added a knowledge of the amount passed in twenty-four hours, and the quantity of urea present, and where there is reason to suspect disease, or where the chemic analysis indicates it, the microscope should always complete the work The reaction can be readily determined by means of litmus paper, the only point worthy of consideration being, in the event of an alkalin reaction, to know whether this represents the state of the blood, or whether it is due to fermentative changes, by means of which the urea has been split up with the formation of ammonium carbonate Should this be the cause of an alkalin reaction, the litmus paper will regain its red color upon drying and warming The urinometers in common use the author had found to be exceedingly unreliable, different instruments giving, with the same specimen, variations ranging from two to six points The chemic tests generally made of the urine are a reproach alike to the chemist and the physician What is to be desired are tests which are reliable under all ordinary conditions, which can be made without the consumption of too much time, and which require a minimum amount of skill for their proper performance For the detection of albumin and for routine work, the essayist is partial to the ferrocyanide test, to the exclusion of all others It has to commend it, both simplicity and reliability It is made by adding to, say, eight grams of urine, about six grams of a solution of potassium ferrocyanide (strength 1 20), and then adding one gram of acetic acid, when, if albumin be present, a distinct cloudiness will appear throughout the mixture

The author called attention to the fact that often much unnecessary confusion is brought about by speaking of the percentage of albumin found in a given specimen of urine As a matter of fact, the actual *weight percentage* of albumin present in urine never exceeds 3 to 4 per cent, and rarely exceeds 1 per cent, and yet it is common to hear of urines containing from 50 to 75 per cent of albumin, reference being had to the bulk of the precipitate formed, usually with heat and nitric acid This must necessarily depend much upon the time allowed for settling, and is wholly inaccurate and unscientific The author then referred to the various methods for detecting sugar in the urine In closing, he called attention to the centrifugal method of obtaining urinary sediment for microscopic examination By means of a small electric motor, carrying two arms with tubes attached, and which can be run by a small battery, the urinary sediment may be obtained in a few minutes

Dr A W Calhoun, of Atlanta, read a paper entitled

THE MANAGEMENT OF HEMORRHAGE AFTER TONSIL OPERATIONS

The frequency of alarmingly profuse hemorrhage after tonsil operations, with an occasionally fatal result, makes this a subject of exceeding interest to the surgeon Such accidents should not, however, stand as obstacles in the way of performing these operations, for the necessity for them is both frequent and urgent Especially in children is the enlarged or hypertrophied tonsil often met with, and the evil effects of the disease are so apparent to the medical and even non-medical observer, that it often calls for prompt action on the part of the physician The ordinary hemorrhage following the operation is of but small consequence, as with a little patience and care the blood soon ceases to flow of its own accord, or, if need be, a gargle of cold salt water suffices to arrest it in the course of a few minutes But when there flows from the cut surfaces a steady stream of blood continuing for hours, then it is that the tact and nerve and skill of the surgeon display themselves to the greatest advantage With an experience of nearly four thousand tonsil operations, the author had seen but few cases of alarming hemorrhage in children Young children are not very liable to dangerous hemorrhage, but it is in the adult that the great danger lies The actual cautery applied directly to the bleeding surface, the author could not suggest, but he could recommend pressure directly applied to the wound, which is the most satisfactory of all means Pass the forefinger, the end of which is covered with a piece of moistened sponge or absorbent cotton, into the mouth and carefully cover the cut surface, and with the wound between the forefinger of the one hand and the palm of the other hand placed externally, exercise gentle but steady pressure The hemorrhage ceases immediately, but recurs upon the removal of the pressure It is now a matter of courage and confidence on the part of the patient and of physical endurance on the part of the doctor In most cases pressure continued for ten minutes to one or two hours suffices to permanently arrest the hemorrhage, but in rare instances it must be continued through twelve to' twenty four hours In these last cases assistance must be called in, so that the persons exercising the pressure can be rested at intervals of half an hour Dr Calhoun has never known this mode of checking hemorrhage to fail, and he recommends it to any practitioner having such a case

Dr R J Nunn, of Savannah, read a paper with the following caption

SOMETHING NEW IN THE TREATMENT OF WOMEN AFTER CONFINEMENT

It is well known that women living in a condition most nearly approaching to a state of nature do not require the "days of lying up" after confinement, nor do they keep them, as do the more civilized races, or the cultivated classes of society The subject of the paper was a multipara who, after the birth of her first child, had suffered with prolapsus accompanied with cysto- and rectocele, continual backache, was generally puny, miserable and run down, at best a small weakly woman, but withal a most determined character, as will be seen later One Sunday morning the patient was delivered and immediately expressed her determination of going to her work on the next day No persuasion could change her resolution Being a widow, she declared it to be a question of bread for herself and her children Under these circumstances it was determined to adopt the following method of treatment twice daily the patient was to use a douche of a warm solution of boracic acid, immediately after which she was to report at Dr Nunn's office Here the uterus would be thoroughly cleaned out with aseptic water, and swabbed out with camphenodin (camphor, iodin and carbolic acid), the faradic current used with a vaginal electrode, a tampon applied, and an abdominal bandage was to be constantly worn The treatment was carried out for about two weeks, after which it was gradually discontinued, and in about a month the patient was discharged apparently cured, not having had a single untoward symptom and declaring that her recovery had been better than after her first confinement, when she kept her bed ten days Since this course of treatment, which is now several months ago, she has been continually at her work, not having missed a day She enjoys better health than for years before and considers herself cured of her prolapsus

As a guide to any one desiring to make further trial of this method of treatment, the author recapitulated the principles upon which it is founded 1, thorough antisepsis, 2, effective internal and external support, 3, local stimulation to hasten involution of the uterus and the return of other overstrained parts to their normal condition, and 4, where necessary, the use of such appropriate general medication as may be indicated

Second Day—Morning Session

The first paper read at this session was by Dr Dunbar Roy, of Atlanta, entitled

THE PROPER CARE OF SCHOOL CHILDREN'S EYES—THE NECESSITY

The author summed up the main points of his paper, as follows

1 That the hygiene of school children's eyes should receive as much attention as that of any other portion of the body

2 That in many cases where there is seeming physical ailment and mental inaptitude such as headaches, dull feelings, inattention, loss of the power of concentration, the cause can be found in some ocular defect

3 That as myopia or near-sightedness increases as the pupil advances to higher grades, such treatment should be instituted as will arrest the progress of that pathologic condition

4 That teachers should be instructed by competent ophthalmologists as to the hygiene of the eyes and the various symptoms which indicate some ocular defect

5 That every child should have his or her eyes examined before entering school, and if necessary a certificate should be given to that effect

Dr Frank M Ridley, of La Grange, read a paper entitled

A DUTY OF THE STATE MEDICAL ASSOCIATION

His remarks referred principally to the State Asylum, in which he said there had been dissatisfaction expressed as to the existing conditions and disappointment as to practical results Most physicians were satisfied that inadequate legislative appropriations to a great extent lay at the bottom of these evils According to the latest reports, there are at least 1,800 inmates in the asylum So densely packed are these unfortunates that fresh applicants are frequently of necessity refused admission to the place, on the ground that it would be dangerous to allow the number of patients to increase As a consequence, in a deplorable number of instances, filthy county jails, swarming with vermin and poorly furnished with beds and covering, are converted into temporary sanitariums for the treatment of the insane Dr Ridley urges that another scheme of investigation should be inaugurated, namely, let the Governor appoint a committee composed of seven of the ablest physicians to visit the asylum once a year, and not at stated times Let them be clothed with full powers to make a searching sifting examination of every department from the kitchen to the superintendent's office Submit to His Excellency a carefully prepared report to be transmitted by him to the legislative body, suggesting such improvements in sanitation and general conditions as may seem to them to be urgent and feasible Let them urge greater attention to the moral treatment of the inmates, as may be suggested by expert study and investigation of the best systems of Europe and America This will require some outlay of money Money thus spent is well spent, and should be met by the funds of the State Treasury Dr Ridley then referred to the inadequacy of the medical staff to perform the vast amount of professional labor assigned it For the medical treatment of the 1,800 inmates referred to, suffering a score or more of nervous ailments, there are not exceeding 5 on the medical staff, a ratio of 600 patients to 1 physician, proportionally a greater charge on the physicians of the Georgia Insane Asylum than of any other similar institution, not only of the United States but of the world Dr Ridley, in closing, urged the Association to memorialize the Governor to co operate with a committee from the Association, looking to the remediation of these conditions

After a free discussion of this paper, the President appointed a committee of five to act upon the recommendations and suggestions contained therein

Dr J M Hull, of Augusta, contributed a paper entitled "Graves' Disease, with Cases"

Dr W S Armstrong, of Atlanta, followed with a paper entitled

REPORT OF SEVERAL INTERESTING OPERATIONS

The first case was one of gastrostomy for impermeable stricture of the esophagus The patient was 30 years of age and a printer by trade

Case 2 was an interesting one, on account of the size of the stone removed from the bladder In this case a supra-pubic operation was performed The stone was of enormous size, elliptical in shape, flattened on two sides, and weighed at the time of removal thirteen and three-quarter ounces Its greatest circumference was twelve inches being larger by one-third than the stone removed by Dr White, of Philadelphia, which has heretofore been regarded to be the largest stone successfully removed from a living person in the United States, without slough and without damaging the tissues These stones compare as follows

	Weight	Circumference
White's	9½ ounces	8½ inches
Armstrong's	13¾ ounces	12 inches, and 9¼ inches at right angles

Patient recovered and now works on a farm

Case 3 was one of operation for gun-shot wound of the abdomen

Dr F W McRae, of Atlanta, read a paper entitled

APPENDICITIS—A BRIEF REVIEW OF MY PERSONAL EXPERIENCE, in which he said that in every case where there is a sudden attack of abdominal pain, especially if there be nausea and fever, appendicitis should be suspected and carefully sought for In many cases it can be excluded, but it is always important to bear in mind the possibility of appendicitis and make a diagnosis at the earliest possible moment Even in the beginning there are signs which point to appendicitis with more or less certainty One of the first signs that may be observed is limited movement of the abdominal muscles of the right side during respiration The four cardinal symptoms as laid down by Dr Murphy are sudden attack of pain over the appendix, always nausea, frequently vomiting, elevation of temperature, exaggerated local tenderness in various positions occupied by the appendix should always be borne in mind Occasionally the pain and tenderness has become localized on the opposite side of the abdomen or in the epigastric region In some cases it is referred especially to the bladder, and the only symptom complained of is pain in the bladder, and either difficulty in emptying it or frequent urination In two of the cases which the author had operated upon, this symptom had been especially well marked In the atypical cases of appendicitis a positive diagnosis is often difficult, sometimes impossible, prior to opening the abdominal cavity Except in the fulminant cases, the treatment should be medical in the beginning The bowels should be thoroughly purged, the diet regulated, counter-irritation or cold applied over the seat of pain and tenderness, and the progress of the attack watched carefully Where the symptoms do not subside after careful purging, and local treatment is indicated, the case should be considered from a surgical standpoint, and where the pain and tenderness are increasing and the general symptoms becoming more and more marked an operation should be done without delay, where favorable conditions and a good surgeon are at hand Since the last meeting, the author had seen in his own practice, and in consultation, nine patients suffering with appendicitis, and two of them having had each two attacks He had also seen one patient, referred to him by the patient's physician, who had treated him through several attacks of recurrent appendicitis in the intervals between the attacks Of these ten patients he had operated on four, and assisted Dr Nicolson in one, making five cases that had come to operation Of the five cases operated upon, three of his, and the one operated upon by Dr Nicolson, recovered One of the cases operated upon by himself was an old man, who died nine weeks after the operation from exhaustion and paresis of the bowels Dr McRae then gave histories of these cases

SECOND DAY—AFTERNOON SESSION

Dr Wm O'Daniel, of Bullards, read a paper (by title) entitled "The Hygiene of Prison Camps in Georgia"

Dr Virgil O Hardon, of Atlanta, read a paper on

LAPAROTOMY DURING PREGNANCY

It is comparatively seldom that the surgeon is called upon to open the abdomen of a woman who is normally pregnant When conditions present themselves which would justify such a procedure in the non pregnant woman, the existence of pregnancy offers a complication which leads us to consider seriously whether the interests of the patient would not be better served by postponing the operation until after confinement There is always present a fear of interruption of the process of gestation involving a sacrifice of the life of the child in an effort to save that of the mother Many cases therefore which would otherwise be legitimate subjects for abdominal section can no longer be so regarded *when two lives are at stake instead of one* Urgent symptoms threatening one or the other of these lives constitute the sole indication for surgical interference under such circumstances The altered conditions imposed upon the pelvic organs by pregnancy give a new and entirely different aspect to many diseases The physiologic engorgement and the rapid structural changes which accompany pregnancy give to such diseases a different clinical history, and must be taken into consideration in discussing the prognosis and the treatment The rapid development of tissue, most notably in the womb, but present also in other organs, extends to the new growths in these organs and causes rapidity of development of pathologic processes proportionate to the rapid development of normal tissue This fact must always be borne in mind as a factor in the prognosis Another question to be seriously considered in such cases is the effect which the diseased condition will have upon the development of the fetus in utero Still another point to be considered is the effect which the operation itself will have upon the continuance of pregnancy Experience has proved that operations for the removal of the ovaries and tubes and even pedunculated subperitoneal fibromas are not incompatible with the continuance of pregnancy It has been shown that such operations not only do not produce miscarriage, but that they have no effect upon the subsequent development of the fetus Probably the most frequent pathologic condition that we are called upon to consider in this connection is that of fibroma of the uterus The technique of laparotomy upon the pregnant woman differs in no material respect from that of ordinary operations Dr Hardon then reported two interesting cases in which he had opened the abdomen during pregnancy

Dr James H Shorter, of Macon, read a paper on

PREVENTABLE BLINDNESS, ESPECIALLY AS RELATED TO SYMPATHETIC OPHTHALMIA, WITH REPORT OF SOME TYPICAL CASES

The author stated that most writers and all text books divide *sympathetic affections* of the eye into two classes—sympathetic irritation and sympathetic inflammation Some observers hold that the conditions are two distinct phenomena, that sympathetic irritation is a functional trouble, a reflex phenomenon, brought about through the agency of the ciliary nerves, while sympathetic inflammation is an organic affection, a genuine irido cyclitis from the start, set up probably by a transference of sepsis by way of the optic nerves The fact that in sympathetic irritation so-called, the removal of the injured eye procures immediate and permanent relief from all symptoms of annoyance in the fellow eye, whereas in genuine sympathetic inflammation such operation exerts but little, if any, influence in arresting the course of the disease, adds much probability to the truth of this theory The author then dwelt upon the symptoms of sympathetic ophthalmia

The treatment of sympathetic inflammation is chiefly antiphlogistic, rest in bed in a dark room, hot applications, leeches, *atropin, etc*, but any and all treatment promises at best but little when once the affection has declared itself Prophylactic treatment, on the other hand, is always infallible, and may be summed up in a few words—remove the injured eye, and to this may be added the further advice, do this in good time, at once if possible The essayist briefly alluded to one case which from the sudden onset of the sympathetic inflammation, its destructive course in spite of early recognition of the condition and intelligent vigorous treatment resorted to, was a typical example and illustrated also the probable futility of all remedial efforts The author laid down as an invariable rule that every eye made totally or partially blind by a penetrating wound, and especially if the globe remains tender to touch, should be removed without delay Even if there be some reasonable amount of sight still left in the wounded eye, this is not a contra-indication for the operation, for it may be set down as almost a certainty that a severely injured eye in which attacks of inflammation recur will be sooner or later lost

Dr Wm Perrin Nicolson, of Atlanta, made some remarks on

LIGATION OF THE EXTERNAL CAROTID ARTERY AS A PRELIMINARY TO AND COINCIDENT WITH OPERATIONS UPON THE JAWS

He stated that in the history of ligation of arteries, the external carotid artery had stood for a long time as a vessel that could not be interfered with, but that Dr Wyeth had concluded from his investigations on the subject that ligation of this vessel was feasible Dr Wyeth's work on surgery contains a full account and description of the normal anatomy of the vessel, its several variations, and the steps necessary to close it The important feature about operations upon the external carotid is that in any trouble involving the external structures, in the face, about the mouth, etc, we can entirely cut off the circulation without interfering with the circulation in the brain, which has always caused a large mortality in the ligation of the common carotid Some years ago, in an operation for removal of the upper jaw, Dr Nicolson concluded to try the ligation of this vessel with a view to lessening hemorrhage at the time of the operation, and more especially in lessening the danger of return of the disease by a process of starvation, cutting off the blood supply from the seat of the growth Since that time he had made the operation four times, always coincident with operations for the removal of the jaw, and more especially in connection with operations for malignant disease He has no untoward circumstances connected with the four operations which he has made, and he feels certain that there is a wide field of usefulness ahead of this operation when it becomes more generally adopted, because the vessel is one which is easily reached and there can be no danger to the patient if the work is properly performed

SCOPOLAMIN AS A MYDRIATIC IN COMPARISON WITH ATROPIN AND HOMATROPIN—A POSTSCRIPT TO A PREVIOUS PAPER

This was the title of a paper contributed by Dr Arthur G Hobbs, of Atlanta Scopolamin hydrobromate has been demonstrated to have some superior qualities as a mydriatic 1 in the small dose necessary, 2, in the few minutes required to produce complete paralysis of accommodation, and 3, in the comparatively short time of its continuance The author had used it in his refraction room almost exclusively in cases where atropin was not particularly indicated The strength of the solutions has varied from 5 to 12½ per cent, and in the latter weak solution he finds that a complete mydriasis is accomplished as effectually and it seems as rapidly as when the forty times stronger solution is instilled While he has, as a rule, used a .2 to a 1 per cent strength, he does *not believe that* in these stronger solutions the result has been either more certain or has been accomplished in a shorter time By all the comparative tests the weaker solutions have given quite as *good* results as the stronger, and in both the results have appeared to be the same as when atropin or homatropin has been depended upon as the mydriatic In the few cases of glaucoma in which he could risk so powerful a mydriatic, no increase of tension was manifested He does *not doubt* that we will find the results of the 1-160 per cent solution, which he is now testing, will prove effectual If so, when it is remembered that we use only from four to six drops from the pipette, the great potency of this drug is almost without a parallel The author is using it in iritis when atropin does not promptly dilate, also in some forms of keratitis with increased confidence

SECOND DAY—AFTERNOON SESSION

Dr J C LeHardy, of Savannah, read a paper entitled "The Use of the Galvanic Current in Office Practice," in which he reported several interesting cases treated by this current with gratifying results

REPORT OF A PART OF MY SURGICAL WORK FOR THE SIX MONTHS ENDING APRIL 15, WITH REMARKS

This paper was read by Dr J B S Holmes, of Atlanta The author reports fifty one cases In no case had an ovariotomy been performed simply for the relief of nervous or reflex symptoms He had operated only for diseased conditions that he knew could only be relieved by surgical procedure, and careful examination, post-operative, had confirmed his opinion in every instance While he believes in conservative measures, the most radical are often the most conservative He is ready to admit that the abdominal cavity had often been ruthlessly invaded and organs removed that should not have been touched They had been removed for nervous symptoms due entirely to other causes, and for which they were in nowise responsible On the other hand, tinkering gynecology was responsible for many diseased tubes and ovaries that could only be cured by removal The introduction of various caustic remedies into the uterus caused destruction and sloughing of the mucous membrane, with a cervical canal in many cases previously constricted and so rendered by the applications that the decomposing masses could not pass out What follows? A septic endometritis, which soon extends to the tubes and ovaries, producing trouble that nothing but the knife will relieve This must be resorted to or the poor woman is frequently doomed to permanent invalidism, condition sometimes worse than death Many of the cases that the surgeon is censured for using the knife upon are caused by such treatment He does not condemn all local treatment, when properly directed, he believes there are many conditions where it is not only admissible but demanded He does not wish to be understood as advocating the removal of every diseased ovary Far from it He declines operation in many cases where the patient is anxious for it He tries to be conscientious and operates only where the disease is so advanced that it has or is likely to render the woman an invalid, and is incurable by any other means The author's experience with catgut as sutures or ligatures has been unsatisfactory He never uses it except when he does a trachelorrhaphy and perineorrhaphy at the same sitting It is hard to sterilize, is soft, slips easy, is hard to tie with any assurance of safety, and is absorbed too quickly While he had always deprecated the use of opium in abdominal work, he had used it with great care and caution Increasing experience convinces him that those cases in which it is not given at all do much better and their convalescence is more satisfactory in every respect Where the pain is so intense and threatens to exhaust the patient from continued suffering, he thinks it advisable to use opium moderately and with great care

At the conclusion of the paper, Dr Holmes exhibited a few specimens removed from women who had been the victims from one to three years of the so called conservative treatment with iodin, iodized phenol, nitrate of silver, nitric acid, carbolic acid, and other similar caustics

Dr T M Greenwood, of Mineral Bluff, read a paper on

OBSTETRICS AS PRACTICED IN THE MOUNTAINS OF NORTH GEORGIA

The author said that a prominent laparotomist of the South stated that healthy mothers were gradually "playing out," but thinks his observation was largely confined to the cities Their habits before puberty are all that nature requires—plenty of pure fresh air, bodily exercise, as necessitated by their daily avocations, clothing loose and suspended from the shoulders, diet plain and simple but nutritious and plentiful In girlhood they roam the fields and forests as boys, vieing with them in strength and surpassing them in many instances in the athletic sports, when suddenly puberty arrives, a change comes to them almost imperceptibly, and they are women, and very soon afterward become mothers Of the 100 nullipara which the author had attended in labor and noted the age, 75 of them were 18 years of age and under, the youngest being thirteen years and two months He had heard of a case a little over 11 years of age They were all normal labors and made good recoveries

Owing to lack of time, several papers were read by title and referred to the Committee on Publication

The following officers were elected

President, Frank M Ridley, of La Grange, First Vice-President, W H Doughty, of Augusta, Second Vice-President, M L Boyd, of Savannah, Secretary, R H Taylor, of Griffin, Treasurer, E C Goodrich, of Augusta

On motion, the Association adjourned to meet in Augusta the third Wednesday in April, 1896

After adjournment, the Association enjoyed a steamboat excursion down the Savannah River to the Atlantic Ocean, and partook of an "oyster roast" on Wilmington Island

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Blank Applications for membership in the Association at the Journal office

American Electro-Therapeutic Association

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept 25, 26, and 27, 1894

William J Herdman, M D, President

(Continued from page 640)

AFTERNOON SESSION

The meeting was called to order by the President at 2 30 p m Report of the Committee on

STANDARD ELECTRO-STATIC OR INFLUENCE MACHINES,

by Dr William James Morton, Chairman

The Committee would add to the recommendation of last year that the minimum size of machine should consist of six revolving discs of glass of at least twenty-eight inches in diameter, instead of four discs as then recommended, and recommend the *a*, inclosing case, *b*, separate exciting machine within the case, *c*, any convenient arrangement of parts to produce the static induced current All these recommendations are now well established in practice

Dr W J Morton read a paper on

ELECTRIC MEDICAMENTAL DIFFUSION

METALLIC ELECTROLYSIS—CATAPHORESIS—SOLUBLE METALLIC ELECTRODES WITH ILLUSTRATIVE CASES OF TINNITUS AURIUM, TRACHOMA, NASAL AND POST-NASAL CATARRH, URETHRITIS, TONSILLITIS, VASCULAR TUMOR, DERMOID CYST, NÆVI, SYCOSIS, ETC

It often happens in medicine that a new method of procedure makes its way to success by a series of steps not seemingly related to each other in time or relevancy This observation seems to me to be true of a number of individual therapeutic procedures which during recent years have been brought to the attention, particularly, of those interested in applying electricity to the cure of disease Reaching back to the time of Fabré-Palaprat in 1833 (introduction of iodid of potassium through the skin), including the success of Benjamin Richardson in 1859 (voltaic narcotism) and culminating in recent years in the practical applications of Peterson, the writer and others (electro cocain anesthesia, etc), the term cataphoresis has sufficed both to name and to explain the practical facts By aid of this principle of cataphoresis, fluids of the human tissue may be moved about, particularly in parts free from active blood circulation, from the positive to the negative pole, or medicine held in solution at a positive pole may be caused to penetrate the skin or mucous membrane at the site of that pole The practice is equally available whether the polar electrode be the usual small one, or be a large one, as in the case of the water of an electric bath And not only may medicines be thus introduced (as demonstrated by an examination of the urine) but they may also be removed from the human system (as demonstrated by using a bright copper plate electrode for the negative pole in the bath and finding a removed metallic deposited upon the copper) So far as relates to the introduction or the removal of medicinal substances, I have termed the process cataphoric medication and cataphoric demedication I have also established a method useful in gouty and rheumatic joints and in other conditions of cutting off the blood supply by rubber rings or by an Esmarch's bandage and thus affording the medicine introduced greater facility to act upon the affected tissue This process I have termed anemic cataphoric medication Turning to another set of the isolated phenomena, which I am about to suggest may be included under one general caption and nomenclature, we are confronted with that great and fundamental principle of electrolysis without which there would be no conduction of electricity in the human tissue, and yet so diverse are its exhibitions according to the strength of the current, according to the actual decomposition of the tissue or its non evident decomposition, and according to the fluids in solution at the poles of the applied electrode or the nature of the electrode itself when introduced within the tissue, that confusion reigns as to specific effects and methods

Involved in this principle of electrolysis and the introduction of medicamental substances into tissue, there are a great variety of special processes as, for instance, cataphoric medication already alluded to, and furthermore, processes where the electrode itself furnishes by electrolysis of its own substance the new medicine introduced (soluble electrodes) or where an insoluble electrode conveys the current which decomposes a fluid introduced within the cavity to be treated The two latter methods are known as the "interstitial electrolysis" of Gautier, or in the case of the soluble electrode as "metallic interstitial electrolysis" of the same author The simple fact which arises out of this confusion is that the electric current causes a diffusion of the medicines into and throughout the tissue

It matters not whether the medicine in solution be applied by a sponge or blotting paper against the skin (cataphoric medication), be held in solution in the water of an electric bath (again cataphoric medication), be injected into a cavity and decomposed (interstitial electrolysis), be dissolved by the action of a current off of a needle perforating the tissue (metallic electrolysis), or be dissolved from an electrode held in contact with mucous membrane (also metallic electrolysis), the result is the same—a foreign substance in solution, viz, a medicine is caused to enter and permeate the tissue It therefore seems to me to be a proper time to generalize the entire facts under the term of electric diffusion of medicines into human tissue or, simply, *electric medicamental diffusion*

To secure this diffusion it is only necessary that the artificial and applied electrolyte (the medicine or substance in solution) be caused to constitute a part of the electrolyte into which it is to be diffused and then the general principles of both electrolysis and cataphoresis come into play, the various ions are redistributed or diffused according to well known laws, while also, equally, the principle of cataphoresis is at work whereby irrespective of ionic distribution, fluids are moved from the positive to the negative pole or sometimes *vice versa* This diffusive property of the current, taken advantage of in connection with human tissue, opens out to electro-therapy and general medicine an immense and a fascinating field of study and practice, and in many important directions points out entirely new treatments of a great variety of diseases thus far not commonly treated in this manner The field is so broad a one that I will confine myself in this communication to the electric diffusion of metallic salts, one form of the interstitial electrolysis of Gautier

ELECTRIC DIFFUSION FROM SOLUBLE ELECTRODES

The destructive electrolytic action in human tissue of either pole of a continuous electric current is perfectly familiar The electrodes are usually of metal, and care is taken that they be unoxidizable, as is, for instance, platinum or gold, if they are to be used at a positive pole, while, if used at the negative pole, they may be oxidizable or not The positive pole electrode, when the current is in action, forms oxygen and acids out of the tissue itself, the acids are mainly hydrochloric, sulphuric and phosphoric The negative pole forms hydrogen and alkalies, the latter usually caustic soda and potash Each pole is practically a little chemic workshop by itself—the one acid, the other alkalin, the analytic and synthetic energy being furnished by the electric current and the materials acted upon being furnished by the tissue The resultant and desired destruction of tissue is due to a number of factors, chief among which are that amount of tissue used to make up the newly formed and foreign chemicals, the secondary action of these newly formed products upon the remaining tissue, and the disruptive effects upon the structural composition of the tissue of the gases interstitially liberated And the character of the artificially produced lesion and its resultant eschar is determined, to a great extent, by the second of these actions, whether it has been an acid or an alkalin corrosion or destruction The lesion resulting at the negative pole is rich in fluids (by cataphoresis), and is slower to heal, it leaves, however, a smoother and less contractile cicatrix (an important consideration in the removal of facial blemishes) The lesion resulting at the positive pole is comparatively dry (also by cataphoresis), is quicker to heal and leaves a rougher and more contractile scar

It will be observed that in this, the familiar form of electrolysis, no account is taken of the nature of the active electrode employed except that it be unoxidizable, insoluble, and therefore indestructible, and that as a consequence reliance for the electrolytic effect is based directly upon the characteristic effect of the current upon the tissue and not upon its effect upon the electrode Any action of the current upon the electrode is, in fact, carefully guarded against

But if we turn our attention to the nature of the metal which composes the electrode, be it the positive or (as I have demonstrated) the negative, an entirely new field of investigation and of results is opened out to our view If our positive electrode be composed of a metal which is attacked by oxygen or by chlorin (formed at that pole out of the tissue), then a new chemic compound is formed at the point of the application, and we have no longer to deal with the effect of the liberated chemicals directly upon the tissue, but we are confronted with a new effect, viz, that of the newly formed chemic compounds (metallic salts) upon the tissue And since, owing to the nature of human tissue, hydrochloric acid is pre eminently formed at the positive pole, we shall find if copper, zinc, iron or other attackable metal is the metal employed at that pole, that we have formed respectively the oxychlorids of copper, zinc, iron, etc, double salts of the metal

In this connection we may observe the further interesting fact that under the above circumstances the action of the current is almost entirely expended in decomposing the metal, and that as a consequence the undesirable destructive action of the usual electrolysis is avoided For, as I have observed in practice and as will be seen upon reference to the cases in which this method of treatment is applicable and peculiarly efficacious, the destructive action of the current would be in the highest degree detrimental The object is not to destroy tissue, as by actual cautery or by the application of caustics, but to implant within it and permeate it with the newly formed metallic salt In fact, so distinctive is this new method, which is termed by Gautier, its modern author, interstitial electrolysis, from common surgical electrolysis, that it is unfortunate to use the term, electrolysis, at all in relation to it The electrolysis is, as has been pointed out, principally of the metal, and but to a very limited extent of the tissue A far more characteristic feature of the process is that the product of the electrolized metal permeates tissue, and it is for that reason that I feel compelled, in speaking of the method, to designate it as electric diffusion

Another noticeable feature of electric diffusion of salts formed from soluble electrodes is that a remarkably low current strength suffices to set free a large amount of the metallic salt Here, again, is a reason that very little of the usual electrolytic destruction of tissue ensues Gautier, indeed, calls attention to this fact, and characterizes this method in its gynecologic applications as one of low current strength and long sittings, in contra distinction to the Apostoli method of high current strength and short sittings In practical work, I have found that very low current strength, from 1 to 10 milliampères, gives much better results than from 10 to 50 milliampères In this connection it should be noted that the electrode loses in weight Gautier has found, as would be expected, that the loss in weight is proportional to the current strength and the duration of the current flow

Again, the solution of the metallic electrode is not confined as thus far supposed, to the positive electrode alone I have found by experiment that soluble electrodes may also be employed at the negative pole One of the best of the metals for this purpose is aluminium The extension of metallic electrolysis to the negative pole greatly widens the field of this new method, since, while at the positive pole we have thus far been confined to the oxychlorids of metals we now at the negative pole may apply to diseased tissue another class of metallic salts

Electric diffusion, as the word, diffusion, indicates, possesses an obvious advantage over the ordinary topical applications of similar or other metallic salts of copper, zinc, iron, aluminium or other metals For it is obvious that not only is the salt dissolved off of the metal, but by another and further property of the current it is forced into the tissue in a radiating direction around the metallic electrode In this respect electric diffusion is remarkably unlike the application of the ordinary solutions by a brush, spray or injection, or their injection into tissue by the hypodermatic needle The solution of the salt is not only applied but it is driven in To use a homely simile, a wash or spray is like a nail held against a board, while electric diffusion plays the part of the hammer which drives the nail home

HISTORICAL—ELECTRODES—TECHNIQUE—CASES—CONCLUSIONS

The dissolving action of the electric current upon a metallic electrode, constituting a positive pole and applied within human tissue, had been noted by various authors in relation to the treatment of some diseases, particularly tumors, by electrolysis Both Butler and Stevenson and Jones refer to this action upon zinc needles and point out the conjoint efficacy of the combined destructive action of the current and the newly formed chlorid of zinc

Onimus, of Paris, and Prochownick of Hamburg, appear to have casually used soluble electrodes at the positive pole The latter applied a copper sound with a current strength of from 80 to 100 milliampères in a case of gonorrheal infection of the uterine cervical canal

But these isolated observations made almost no impression upon practice, and it remained for Dr Georges Gautier, of Paris, to grasp the broad idea of diffusing metallic salts from soluble electrodes and to inaugurate by a series of experiments this new system of procedure[1]

At once appreciating the far-reaching merits of the new method, I established its use in a great variety of cases in my clinic at the New York Post-Graduate Medical School and Hospital as early as 1891, and also at the same time in private practice The method was taught to matriculates by actual demonstrations Experiments were made of its effects in trachoma, hypertrophic nasal catarrh and ozena, gonorrhea, keloid, and continued, in a great variety of diseases, and with a variety of metals at the positive pole Obviously, the method once understood implies its application to a large number of cases and by any soluble metal Papers and contributions to journals and societies have been published by my clinical assistants detailing my work and instruments and by Dr Clarence C Rice, of New York City

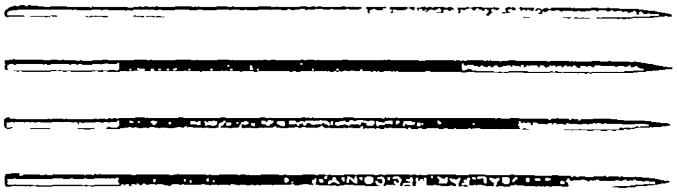

Fig 1—"Soluble" Needles

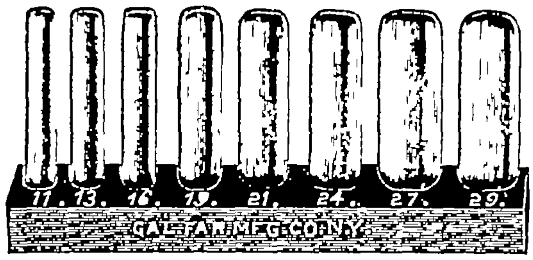

Fig 2—"Soluble" Bulbs

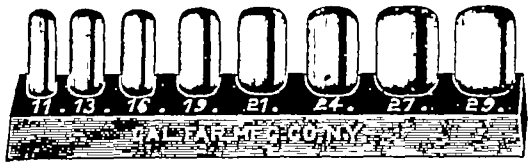

Fig 3—"Soluble" Bulbs

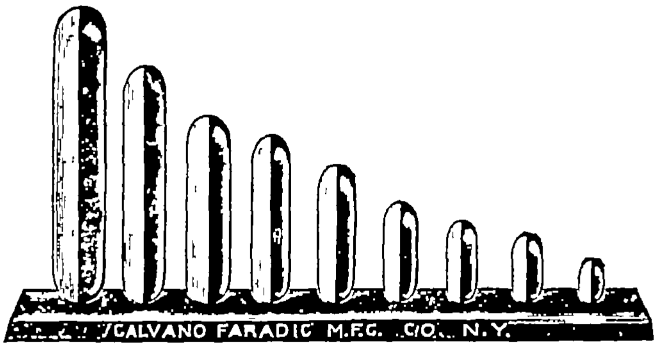

Fig 4—Protected Soluble Electrodes

Electrodes—Successive applications to diverse morbid conditions continually suggested new electrodes suited to the individual classes of disease These have been made as occasion arose by the Galvano-Faradic Manufacturing Company, of New York City, and may be bought of them

Needles, Fig 1 These are manufactured of any desired metal I use preferably, copper, zinc and iron at the positive pole and aluminium at the negative About 1 millimeter in diameter and 8 centimeters in length form a convenient size Insulated material restricts the action of the current to the locality desired to be affected and prevents action upon the sound skin They fit an ordinary needle holder

Bulbs—Figs 2 and 3 Like the needles these are manufactured of a variety of metals For convenience they are constructed in sizes of the French catheter scale, each bulb capable of being attached by a screw thread to a universal handle The sets resemble those known as Dr Fry's, and were first made of copper by Dr A H Goelet

An important modification of the bulb (Fig 4), devised by the writer more than a year ago, is to divide it longitudinally into one-half metal and the other half ebonite, thus affording a protected and an active side of the electrode, for it often happens as in the rectum, urethral canal, cervical canal and other canals, sinuses or cavities, and in trachoma that it is undesirable at a single treatment to attack approximating surfaces, again, it may be desired to protect a given surface

The handle curved at right angles is used in the post-nasal cavities The metal may be bent to any desired angle, its tip is insulated and an insulating sheath exposes any desired area for active effect

Obviously, electrodes for special cases will suggest themselves, and types familiar in form will be constructed of soluble metals as occasion demands

Technique—I have already expressed a preference based upon much experience, for low current strength and prolonged time It is difficult to lay down rules which shall apply in so many diverse diseases In needle puncture (copper or zinc needles) I prefer to use no more than 2 milliampères applied at any one site for about three to five minutes In a case of sycosis, reported later on this was quite sufficient to cure the disease In lupus, ulcerations, pustules and acne this is also quite enough current strength Gautier reports using 50 milliampères in a case of lupus, but I have found the high current strength seriously objectionable because of the consequent electrolysis of tissue and extension of the time of healing In hypertrophic nasal catarrh with copper bulbs, I find about 4 to 8 milliampères sufficient In ozena the same, in trachoma 1 to 2 milliampères and in intra-uterine applications from 10 to 20 milliampères, in gonorrhea 1 to 2 milliampères

No positive rule can be laid down, since much depends upon the size of the electrode In order to facilitate accuracy of dosage, I employ copper bulbs graduated according to the French scale of catheter or other electrodes whose surface area is a known quantity

The operator may convince himself, if he desires, of the great rapidity of the electric diffusion of the copper salt by sticking the needle lightly into his own skin, or that of a patient, and watching the almost immediate formation of a small circular area of an apple green color This is also well

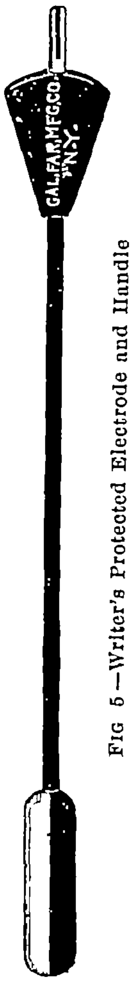

Fig 5—Writer's Protected Electrode and Handle

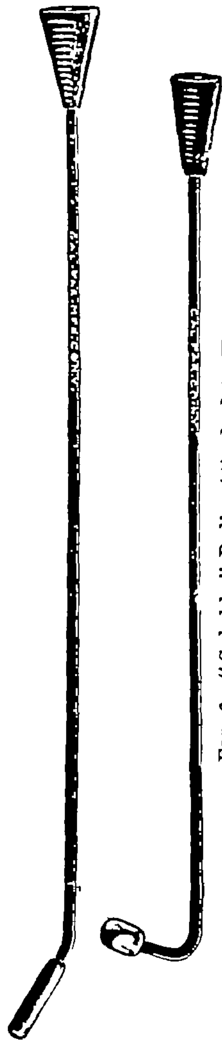

Fig 6—"Soluble" Bulbs Attached to Handles

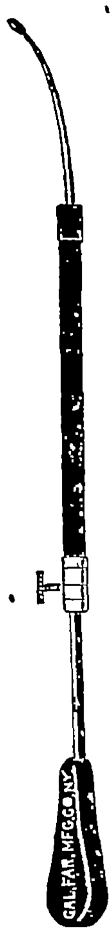

Fig 7—Protected Sound of "Soluble" Metal, Copper, Zinc, Iron, etc

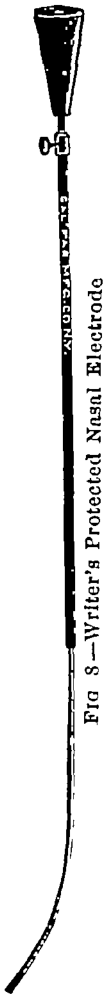

Fig 8—Writer's Protected Nasal Electrode

seen in a small wart or similar growth, the mass turns light green Or the copper needle may be inserted into the white of a "hard boiled egg" or into a piece of meat, and the same rapid formation and diffusion of the copper salt be noted

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[1] Revue Internationale d'Electrothérapie, July, 1891, August and September, 1892 Also Technique d'Electrothérapie, by Drs Gautier and Larat

A practical point of importance is to thoroughly polish each electrode immediately before using it This is easily accomplished by the aid of a piece of fine emery paper

The adherence of the electrode to the tissue is a peculiarity and a danger Even with a current strength of from 2 to 4 milliampères this adherence is noticeable Therefore even when low current strength is employed as during the application of smooth metallic surfaces to mucous membrane as in nasal and throat diseases, in trachoma, urethritis, etc, the electrode should be kept in slow movement, either longitudinal or rotatory In the case of needles plunged into tumors and of sounds within the uterus this adherence can not be overcome by any safe manipulation, the needle must be loosened by reversing the polarity and using from 4 to 8 milliampères for about five minutes The adhesion is due to the formation of an albuminoid salt of copper (where the electrode is of copper)

An operative outfit consists of any good galvanic battery, a water rheostat, a sensitive galvanometer needle and appropriate electrodes

Cases—I present the records of a few illustrative cases It is needless to say that much has been learned as to technique, precision and efficacy in securing results in individual diseases since my first cases were recorded Certain cases of lupus, cancer, etc, now under treatment are reserved until sufficient time has elapsed to enable a mature opinion to be given as to results

CHRONIC TINNITUS AURIUM

Probably there are few minor troubles more annoying to the patient than a chronic ringing in the ears, certainly there is no minor condition more difficult of cure The cases as I have seen them are often associated with some degree of catarrhal trouble and commonly with tympanic vertigo and moderate deafness

Case 1—H E, age 33, cured Referred to me March, 1893, by Prof D B St John Roosa, to relieve him, if possible, of a most annoying and persistent ringing in both ears Five years ago had a 'dry throat," had little saliva, mucous membranes cracked and bled, was treated by sprays for two years with no benefit, then used antiseptic washes The uvula was elongated and had been cut off Throat never ceased to trouble him Two years ago had the grip, and about this time the ringing began Present condition weary, 'nervous," depressed and irritable with much frontal headache and an almost continual ringing, worse in the left ear The sound is like that of a distant cricket or like a sharp whistle, it worries him most when he is tired or when he lies down or after *sexual intercourse* Sleep is often disturbed because he can not get rid of the sound in his ears As a rule it is worse at night Has likewise much post-nasal discharge Hearing in left ear considerably impaired, has some vertigo The first treatment to the ears and throat was by the static induced current, then the sinusoidal, both followed by amelioration in the degree of the sound and by intervals when it ceased for a few hours But the progress was not satisfactory to me and I determined to treat the catarrhal condition first and cure it, before following up further applications to the aural region alone

March 29 Electric diffusion, copper bulb, throughout the post nasal and pharyngeal region, 12 milliampères five minutes to each side

March 31 Discharges from nose anteriorly and posteriorly almost *nil*, ringing about the same

April 3 Ringing unimproved, headache better, slight nasal discharge Repeated treatment

April 4 Raises slightly thick discharge from throat, watery discharge from nose, ringing same as ever

April 5 No discharge Treatment repeated Reports never felt so well for years, of the catarrhal symptoms Ringing in ears ceased during the treatment

April 7 Headache, ringing in ears worse, no nasal discharge Treatment five minutes, 10 milliampères

April 8 For a half hour after rising this morning was free from the ringing

April 10 Ringing ceases for long periods, no nasal discharge

April 13 Ringing continuous Treatment same

April 14 Ringing very slight, no headache, very little nasal discharge Treatment, five minutes, 5 milliampères

April 15 Much ringing in left ear

April 19 Reports a discharge from the left nostril which colored the pillow in the night, a good deal of catarrhal trouble, bright yellow discharge and intense headache, also that his hearing was not so good Discontinued treatment at the patient's request

May 3 Against the patient's desire I persevered with electric diffusion, applying the electrode freely to his hypertrophied tonsils and post-nasal region on the sixth, tenth and thirteenth The ringing still persisted in a marked degree

May 19 Ringing the same, vertigo Treatment same

May 25 Ringing and catarrhal troubles have ceased since last treatment The throat presented an almost normal appearance, the narrowing and congestion of the fauces had disappeared, the tonsils were normal in size One more treatment was given and the patient was allowed to cease, as nothing further remained to be accomplished The treatment by electric diffusion from copper had occupied about two months and had been repeated about twelve times

Jan 30, 1894 Patient reports that he has had no further ringing in ears and remains well of it, in spite of an attack of the "grip" during the winter

TRACHOMA

With the pathology and histology of this disease we have here nothing to do It is merely a question of causing the absorption of the sago-like granulations or elevations in the conjunctiva, with the relief of the associate symptoms of pain, lacrymation and in the acute varieties the mucus discharge The classical treatment is by operative or medicinal measures The former removes the granulations by squeezing out their contents, the latter attempts to cause absorption by setting up by various drugs a certain grade of inflammatory reaction It is here proposed to treat this obdurate affection by another method, viz, the combined action of electricity and a nascent metallic salt caused to permeate the affected tissue by means of the diffusive property of the electric current This method is very successful

The use of electric diffusion in this disease first occurred to me in the case of an Italian woman under treatment for goitre at my clinic The case briefly follows

Case 1—Jan 4, 1892, R P, age 50, trachoma, both lids of both eyes Extreme photophobia, intense corneal vascularity, excessive lacrymation, trachomatous bodies ("sago grains"), impaired vision Treatment, electric diffusion from a copper electrode An impromptu electrode was formed by bending a piece of copper wire into a suitable U shaped loop The loop was then passed *slowly* over the affected surfaces of the lids, while at the same time a current of 2 milliampères was flowing The reader is referred to later cases for more typical results, for the reason that the treatment was inadvertently substituted at times by the use of the negative pole But the cornea cleared, the trachomatous bodies became greatly reduced in number, the photophobia was much less, no lacrymation, the vision improved, the patient could see better and was able to read This case simply initiated a method which was afterward carried out with more care and greater detail in my clinic, by myself and my assistants

Care in manipulation is requisite The eyelid should be everted as is usual in applications of the sulphate of copper or alum pencils, or the special protected electrodes devised by myself (Fig 4) may be employed, without everting the lids The electrode should be kept very slowly in movement or it will adhere to the conjunctiva and cause slight laceration upon removal, or at least compel the operator to reverse the polarity Any metal, soluble at either pole may be employed, but copper and zinc are undoubtedly the best The electrode without current will cause pain and with current somewhat more pain To annul the pain, cocain may be used in the usual manner

Case 2—Acute trachoma, first stage March 22, 1893, patient age 11, had purulent conjunctivitis, upper and lower lids of both eyes trachomatous Treatment Electric diffusion from copper electrode, 2 milliampères, one minute to each lid After the first treatment the photophobia almost entirely ceased and the granules diminished in size The patient received six applications and was cured April 29, 1894, about a year later, reports that he had remained well

Case 3—July 21, 1893 P, age 21, trachoma second stage Referred to the clinic by Dr Francis Valk, of the Ophthalmological Department of the Post-Graduate Medical School During one year had suffered severely from photophobia, lacrymation and pain Extensive ulceration of cornea and lids highly trachomatous Treatment Electric diffusion from copper electrode, 3 milliampères July 24, patient much better, no pain, swelling of lid and ptosis of right eye much diminished Less photophobia, soreness and lachrymation, trachomatous bodies very much softer and less gritty to contact of electrode Electric diffusion from copper, 10 milliampères from two to three minutes July 26, edema of the lids has entirely disappeared, slight ptosis remains, no lachrymation, trachomatous bodies no longer isolated, cornea almost entirely clear Same treatment July 31, after the fourth treatment the trachomatous bodies had become entirely absorbed Cornea perfectly clear Dr Valk stated that the result "was 50 per cent better than he could have secured with the classical methods of treatment" Six more similar treatments completed the patient's cure, with the simple exception that some slight conjunctival redness remained as well as a moderate sensitiveness to bright sunlight May 8, 1894, as the patient has never returned he presumably has remained cured

Case 4—July 21, 1893, A D, age 8, trachoma, second stage Purulent conjunctivitis with congestion and edema of the surrounding tissues, both upper and lower lids profusely covered with trachomatous bodies Five treatments, electric diffusion from copper electrode, 3 to 7 milliampères, cocain The first treatment was followed by diminution of the mucus discharge, of the pain, lacrymation and photophobia, the trachomatous bodies softened and were gradually absorbed Cured

Case 5—August 30, 1893, W T, age 16, granular lids for seven months, pain, stiffness of lids, photophobia, morning adherence of lids, electric diffusion from copper, 3 milliampères After twelve treatments, case cured by October 30 Applications were imperfectly made, owing to the refractory nature of the patient

Case 6—Jan 15, 1894, K S, age 17, native of Egypt, trachoma, third stage, always had weak eyes, began to be troublesome five years ago Has photophobia, lacrymation, constant muco-purulent discharge and pain Can only see as "through smoke" Palpebral conjunctiva scarred and white Both lower lids, palpebral conjunctiva, adherent and dragging in the eyeball Cicatricial conjunctivitis Case "incurable" Treatment Electric diffusion from zinc electrode, 5 milliampères to conjunctivæ of both eyes March 9, 1894, reports both eyes better, now sees clearly, lacrymation has ceased, lids are no longer glued together in the morning by the mucus discharge Repeated diffusion from zinc, 3 milliampères to lids of both eyes March 23, 1894, adhesions between the conjunctiva and the eyeball at the left lower lid were treated with negative electrolysis, 1 milliampère April 18, 1894, palpebral conjunctivæ have assumed a more normal appearance Circulation improved, less induration, patient regards herself as very well

Case 7—March 23, 1894, M B, age 11 acute trachoma, first stage Lids edematous, conjunctivæ injected, lacrymation, upper and lower lids of both eyes trachomatous Treatment Electric diffusion from copper, 1 milliampère March 26, no edema, conjunctivæ lessened, sago grains have disappeared, treatment same March 28, 1894, much better, slight redness of conjunctivæ, no mucus discharge, pain or photophobia, eyes clear and bright, 3 milliampères to both eyes April 13, 1894, cured

HYPERTROPHIC RHINITIS AND PHARYNGITIS

The class of cases here referred to were of a chronic type and exhibited anterior and posterior nasal discharge, generally thick and purulent, the disturbed sensation of swallowing, due to retained secretions in the post nasal space, narrowing of the rhino pharynx and the characteristic symptoms of hypertrophy of the nasal and pharyngeal mucous membrane Their treatment was carried out by electrodes of copper and zinc devised by the writer, see Figs 3, 4 and 6, and by a method devised and taught by him to clinical assistants, among others to Dr M A Cleaves, who has written a paper whose originality is derived substantially from the writer's teaching in this as in other branches of metallic electrolysis Struck by the results obtainable in this disease by this method, I also called the attention of Dr Clarence C Rice of the Department of Laryngology, Post-Graduate Medical School, to these results and he has, he writes, made trial of the soluble metallic electrodes in a number of cases which he has reported at a meeting of the American Laryngological Association in Washington

Case 1—Nov 27, 1891, B M, age 15 Ozena One year ago patient contracted an acute catarrhal cold, it continued a month, since then has had a chronic catarrhal condition of the nasal passages Odor began four months ago There is a greenish muco-purulent discharge from the nose, post-nasal droppings and a slight irritative cough Treatment, Electric diffusion from copper electrode As in the first trial of this method in trachoma, so in this case the negative pole was also used But experience soon taught me to confine the treatment to electric diffusion from the positive metallic electrode By December 9, after four treatments the discharge was less, the odor less noticeable and the respiration freer

January 8, examined by Dr C C Rice who reports deviation of septum toward right, left nostril twice the width of the right, middle turbinated bones covered with dry scaly secretions, pharynx dry with hypertrophied ridges on the sides Further treatment by diffusion from copper was carried on, 1 milliampère for ten minutes January 15 and 18, 5 milliampères each nostril, also same January 20, 22 and 27 Discharge diminished and less greenish February 1, 3 and 5 same treatment Patient though not cured is much better, less discharge, odor and headache Improved

With the present improvement in methods and electrodes I should expect to cure this patient should the opportunity present itself

Case 2—August 8, 1893, D L G, age 41, ozena, post-nasal catarrh, atrophic Has always "taken cold" easily Had catarrh at 13 years of age, at 18 it had increased a great deal and he began to use salt water and a great many other nasal douches and "went to a great many doctors" His sense of smell became much impaired nine years ago and has been growing worse ever since, until at present he can not detect odors The patient states, though I have had no opportunity of verifying his statement, that one year ago he had the antrum opened by Dr Toeplitz, assistant to Dr Knapp, and pus evacuated This opening is still patent and must be plugged twice daily Symptoms Copious and most offensive anterior and post nasal discharge, a great many crusts form, the nose bleeds easily, odor from patient's nose and mouth most offensive Treatment Electric diffusion from copper bulbs, Nos 27 and 29 (Fig 3) to naso pharynx, 15 to 25 milliampères, occupying about five minutes August 11, same treatment Pharynx very much less congested, more discharge, patient says he feels very much better August 15 and 23, crusts free themselves more easily, increased discharge from nose and slight bleeding after douching, treatment same August 30, patient reports that his condition is very greatly improved, the incrustations remarkably diminished, very much less discharge, and that morning for the first time in eight years the sense of smell had returned to him and he had smelled paint and once more enjoyed eating, there was no offensive odor The patient expressed himself as "50 per cent better," and stated that no other treatment had ever accomplished as much for him

Case 3—Oct 21, 1892, A R, age 9, profuse muco-purulent discharge from the nose, nasal and pharyngeal obstruction of one year's duration Treatment Electric diffusion from copper electrode, about five minutes in duration and with a current strength varying from 5 to 10 milliampères Symptoms began to improve at once and after fourteen treatments, each several days apart, the patient was cured

Case 4—April 5, 1893, F A, age 20, hypertrophic rhinitis Had diphtheria in November 1891 Ever since has had severe catarrhal trouble in frontal sinuses and nasal passages, anterior and posterior Profuse, thick, yellowish discharge and much dropping of the discharge posteriorly Feeling of intense fullness across forehead, upper lip and anterior portions of nose reddened and excoriated Treatment Electric diffusion from copper electrodes in anterior and posterior nasal passages on the left side April 12, discharge not nearly so profuse nor as yellow on the side treated, less redness about the nose and lip Right side treated in same manner as left, 10 milliampères for five minutes Like many patients of this class he did not return and the case merely suffices to point out the immediately favorable effect of the first treatment

Case 5—Mrs G W E, age 34, nasal catarrh, hypertrophic Has had catarrh for three years with constant "dropping in back of throat," heaviness and dullness in head around eyes, used handkerchief constantly, good deal of nausea

April 28 Electrolytic diffusion to left nostril Positive pole, 3 milliampères for fifteen minutes

May 3 Feeling of heaviness in head in morning gone, no nausea, application made to left nostril 5 milliampères, ten minutes, nose feels very much clearer, discomfort from application gone in half an hour

May 5 Same treatment to both nostrils, is feeling a

NOTE—Unfortunately, owing to unavoidable circumstances, this patient ceased treatment and has not since been heard from It is to be regretted that the same treatment, as might easily be done, should not have been tried for the antrum good deal better, dropping in back of throat gone, scabbing in interior nostril does not occur, also diminution in amount of discharge

May 9 Until yesterday felt well, has taken cold and amount of discharge has greatly increased, large scab in left nostril, this was treated locally

May 15 Very much less discharge, 6 milliampères to each nostril

June 24 About twelve treatments more of same strength, application also made to pharynx and naso pharynx, about 10 *milliampères Is very much better and is troubled but* little Went away on vacation at this time and the last of September returned feeling well and nasal symptoms entirely relieved Cured

Case 6—Miss H J, age 48, post-nasal catarrh About fifteen years ago affection began in left side, had ringing in ears and heavy cold, since has had constant buzzing *on that side, ticking of* watch not heard, right ear normal Is not particularly susceptible to colds, hearing is worse with a "cold," no pain, has dropping of secretions into throat Appearances, left side pharynx atrophic, right side, pharynx hypertrophic, soft palate and entire isthmus dusky red Treatment Electrolytic diffusion 10 milliampères, applied *positive pole about six minutes* all over pharynx, also through left *nares 10 milliampères* five minutes For a few *minutes* the amount used was 20 milliampères Cured

FOLLICULAR TONSILLITIS

Case 1—Oct 18, 1893, B G A, age 15, throat began to be sore two days previously, painful and swollen, sense of malaise and nausea, tonsils enlarged and grayish white spots on both Treatment Electric diffusion *from* copper electrode to every spot

October 20 No more trouble with throat Tonsils normal in appearance except for slight increase in their normal redness

Case 2—Jan 18, 1894, F D, aged 18, shivering and hot flushes, *malaise, temperature* 100, *grayish*-white spots on tonsil Treatment Electric diffusion from copper, 10 milliampères to every follicle as well as over entire tonsil January 17 Patient reports that the throat was entirely *relieved* the next morning and to day feels entirely well Tonsils about normal in appearance

URETHRITIS

Case 1—May 4, 1892, A M, age 30, contracted disease in December, 1891 For ten *months* thought himself well Discharge recommenced May 1, 1892, slight, free and painless, no treatment

May 1 Treatment Intra urethral (from neck of bladder *to* entire mucous surface), 2 to 3 milliampères electric

May 11 Electric diffusion from copper electrode, 2 *to* 3 milliampères A brass bulb of proper size and connected to an insulated stem was passed as far as the *neck of the bladder*, the current turned on and the electrode then slowly withdrawn, thus bringing under the influence of *the* cupric and zinc diffusion the entire urethral surface The dispersing electrode was *placed upon the* abdomen

May 13 Patient reports that the discharge has entirely ceased Later on he reported that it never returned and he remained cured

Case 2—A M, March 19, 1893 One year later the patient referred to in Case 1, exposed himself to a new infection and contracted a *severe attack* of urethritis Mindful of his previous cure he returned for the same treatment The discharge was profuse, whitish and of the usual consistency, there was pain upon micturition Treatment Electric dif*fusion* from copper, 4 milliampères the electrode slowly withdrawn At one moment when the electrode temporarily adhered or "stuck," the current was reversed to negative to loosen it

March 27 Reports that he is much better

March 29 Reports to day complete *cessation of the* discharge after the treatment of the 19th, but that he has now a slight relapse from "*drinking too much*" Treatment renewed

March 31 Reports that he is *cured*

It may be noted here that extreme care to prevent adhesion of the electrode *to the* mucous membrane must be exercised in these cases A delicate milliampèremeter is imperatively *necessary*, as well as a good rheostat From 2 to 3 milliampères of current is sufficient and the electrode must be kept in motion At least this is the method of treating the urethra which has forced itself on my attention as essential It is beyond question the great feature of this method, *in* contra distinction to that by injections, that the *mucous* membrane is electrically permeated with any given metallic salt, say the chlorid of zinc or copper, rather than simply superficially washed by a solution of *the same salt There is an actual* chemic *union of* the metallic salt and the deeper albuminous constituents of the tissue

TUMORS ETC

Case 1—*May 18, 1892*, L S, *age* 60, vascular tumor on upper lip, nine years' standing, increasing in size Three-*fourths of an inch in diameter, bluish cast of* color and can be partially emptied by pressure Treatment Electro-cocain, local anesthesia, first punctured by a platinum needle, positive pole, 15 milliampères for ten minutes Upon withdrawing the needle, considerable hemorrhage ensued It therefore occurred to me *to insert an* iron needle, positive pole, and secure the *electric diffusion of the* oxychlorid of iron—a styptic salt *This was done with 15 milliampères* for five minutes There was no hemorrhage upon the withdrawal of the *needle and the tumor shrunk visibly in size*

May 20 Tumor more compact, electric diffusion from an electrode 25 *milliampères, twenty minutes To withdraw the electrode without* tearing tissue, the current was reversed at 15 *milliampères for* five *minutes*, no *hemorrhage*, needle almost destroyed by the action of the current Tumor contracted

May 23 Tumor reduced one third in size This patient did not return

Case 2—Feb 13, 1894, Mrs R, age 30, lipoma, one and one-half *inches long by one inch* wide at base of neck Patient was unwilling to take ether to have the *growth removed and* did not want to have a scar Experimentally, since I knew of no previous fatty tumor removed by electricity, I consented to try and extirpate it Operation Electro-cocain, local anesthesia, 7 milliampères, 10 per cent solution cocain for ten minutes A puncture was made with a microscopic trocar and the small piece of tissue sent to Dr H T Brooke of the Post-Graduate School, Pathologic Laboratory *for examination* He subsequently pronounced it to be a lipoma A copper electrode, three quarters of an inch in length and one sixteenth in diameter was inserted into the puncture made by the trocar, the skin being protected by the insulation of the stem of the electrode The electrode thus sunk into the center of the mass of the tumor was allowed to *remain for* twenty-three minutes, with a current strength ranging from 10 to 25 milliampères The resistance to the current flow was great, owing to the fatty nature of the growth At 25 milliampères the patient had violent palpitation of the heart and was upon the verge *of* syncope owing to the presence of the electrode near the *great nerve trunks* The wound being antiseptic no special dressing was applied

February 28 Patient reports that the tumor has entirely disappeared

May 12 Patient returned to New York from Chicago and presents herself *for* examination No trace of the growth remains, a *slight* red spot rapidly disappearing marks the site of the puncture Cured

Case 3—May 16, 1893 M H H, age 25, wen or dermoid cyst Tumor began six years ago, about the size of a pea on the neck below and behind the ear Two years ago it began to increase in size and to day is about one inch and one-quarter in diameter The patient decisively refuses to take an anesthesia, wishes *to avoid the* scar from an incision and asks to have the tumor removed by the aid of electricity Tumor hard and movable Treatment Electro-cocain, local anesthesia to skin over tumor, puncture made, contents of sac mostly expressed and cavity injected with a saturated solution of iodid of potash—a non soluble metallic electrode remaining within the sac with the solution, a current of 15 milliampères was allowed to flow for ten minutes, with the purpose of setting free the iodin and obtaining its effect in a nascent state upon the lining of the sac

May 19 No soreness Tumor soft and pliable but hardening

May 22 Tumor about two-thirds of its former size

May 23 Tumor again filled and the operation was a most obvious failure I resolved to try *another method*, viz, electric diffusion from a soluble metal This was done with 20 to 30 milliampères of current for about ten minutes

May 31 Slight serous discharge of an orange yellow color

July 1 Patient *not seen* again until this date, when he returned to state that the discharge had quickly ceased and that the tumor had entirely disappeared, leaving no evidence of the operation Seen May 1, nearly one year later, there has been no recurrence. Cured

SYCOSIS PARASITICA

E H, age 50 Disease began seven years ago Patient stated that he had tried to pull out an ingrowing hair and it broke off A papule formed here, and following this a diffuse redness began to spread itself in all directions from the site (the left side of the face just in front of the ear), at the same time papules formed, coalesced and spread outward No pus was formed at first but after a short time the tips of pimples became white and pus was discharged This was followed by an exudation of serum from the excoriated surface and shortly before it was operated upon discharged in twenty-four hours one ounce of serum He has been everywhere and tried every treatment to no advantage until last October, the 21st, when he was operated upon at the New York Post-Graduate Hospital by Dr R Y Morris who removed the skin and subjacent tissue over an area in front of the ear about five and one half inches long and two inches wide Skin grafts were then applied which did well till one day about a week later he was out in the cold and a portion of the ears froze and had to be removed, which left when healed a scar two inches long and one inch wide in the center of the wound All went well and the part looked healthy till February last, when signs of the old trouble began to show themselves in the skin just outside of line of incision and when he presented himself to me the characteristic papules had spread themselves over a surface of about three inches long by two wide, in places the tissue was covered with small blebs and had a boggy appearance, into which a needle could be thrust for a distance of one quarter of an inch without producing pain or discomfort

April 20, he began treatment, which consisted of electric diffusion from copper electrodes 1½ to 2 milliampères ten to twenty applications, lasting in all ten to fifteen minutes, until the green oxychlorid of copper gave a distinct coloration to skin and tissue, using the positive pole, with the negative in back of neck This was repeated eight times, the last one about May 10 The aluminium needle was used twice and the negative pole with equally successful results

May 14 He came with the skin over lesion showing a normal and healthy condition Treatment ceased with the injunction to return if there is the slightest evidence of recurrence

NOTE—The alternatives in this case were, I am informed by Dr Morris, further incision or curetting both of which were objectionable, because the cicatrix was already extremely tense and no further tissue could well be sacrificed The effect of the electric diffusion method was remarkable It left behind it almost no observable cicatricial tension, in this respect much unlike ordinary electrolysis, and unlike the effects from the knife or the curette

I have employed electric diffusion from metals in a variety of cases not here enumerated Its action upon hemorrhoids has been to cure them in the few cases in which I have tried it I have used it in endometritis, cystic degeneration of the cervix uteri, in ulcerations of the rectum, in keloid growths, etc I am at present treating lupus and epithelioma with thus far favorable results, and have even begun upon a case of sarcoma, but it is too early to make any report upon this later set of cases Dr Gautier has reported excellent results in a great variety of gynecologic procedures and conditions

CONCLUSIONS

1 The salts of many metals may be electrically dissolved from metallic electrodes, and at the same time be caused to permeate human tissue to a considerable depth In the case of copper, upon dead tissue, with a current strength equal to that employed in living tissue, this depth is visible as an apple green color, in a radius about the electrode of from one-fourth to one-half of an inch, it probably extends invisibly much further, shading off to a minimum

2 The electrically formed and electrically diffused metallic salts are not destructive to tissue in the sense that ordinary electrolysis is, the effect is rather by the presence of a partially insoluble salt and by the effect of a newly formed organo metallic salt, de-nutritive or absorbing upon diseased tissues

3 It would seem to the writer that these electrically formed salts, in forming new albumin composed of the metal used as an electrode possess a selective affinity for diseased in preference to healthy tissue, or at least produce a more profound reaction upon the morbid tissue, causing a favorable alteration in the nutrition of the part

4 Electric diffusion is greatly superior to topical applications, for the reason that the medicament is caused to penetrate the tissue acted upon

5 This method opens up a new and interesting branch of electro therapy

(*To be continued*)

SELECTIONS

Antispasmin, a New Remedy for Pertussis—Truhwald in the *Archiv für Kinderheilkunde*, describes antispasmin (Merck) as a substance in which a molecule of narcein with sodium is united with three of sodium salicylate It is freely soluble in water Air and light decompose it, hence it must be kept in blue glass, well stoppered It is expensive The following dosage is recommended in whooping cough

Children under 6 months 3–5 gtt of a 5 per cent solution three or four times a day, children of six months 5–8 gtt of a 5 per cent solution three or four times a day children of 1 year 8–10 gtt of a 5 per cent solution three or four times a day, children of 2 years 10–12 gtt of a 5 per cent solution three or four times a day, children of 3 years 15–20 gtt of a 5 per cent solution three or four times a day children over 3 years 10 (–15) gtt of a 10 per cent solution three or four times a day—*Centralblatt für innere Medicin*

The Fate of Micro-organisms in Various Articles of Clothing—(A D Nikolski, *Wojennomedizinsky Journal*, September, 1894) The writer tries to ascertain to what extent the physical properties of materials can be regarded as favorable to the extension of the life of micro-organisms Experiments show that in coarse, rough and porous stuffs, micro organisms retain their vitality longer than in more compact and smoother The explanation is that the thick and porous stuffs can absorb more moisture and retain moisture longer than thin, smooth and compact textures Further, materials which, after infection, are exposed to light, furnish a smaller number of colonies than those which are secluded from light, and vitality ceases more quickly These experiments were made with staphylococcus aureus, the bacterium of typhus abdominalis and the cholera bacillus—*Centralblatt für Chirurgie*

Review of Twenty Cholecystotomies—C Erasmus classified twenty cholecystotomies performed by him, as 1, cases in which gall stones were found, 2, in which a stone was found in the ductus choledochus, 3, in which no gall stones were found In seventeen cases the patient had suffered with a typical colic, in the others there existed a tumor, evidently of the gall bladder A tumor was present in eleven cases in all In one case a movable kidney caused doubt in connection with an enlarged gall bladder, but it was shown that the symptoms for which the operation was performed were produced by a stone in the ductus choledochus In eleven cases, icterus preceded In eight cases, enlargement of the liver was observed In performing the operation an incision along the outer margin of the rectus abdominalis is preferred to the cross-incision along the edge of the ribs (on the right), because with the former the gall bladder can be more easily sewed to the peritoneum He then dissects up part of the peritoneum, and draws it, funnel shaped, down to the gall bladder Once the incision was made in the median line because complicating conditions seemed to exist This was in the case of the movable kidney already mentioned The operation was performed as often at one sitting as at two, the contents of the gall bladder, whether purulent or serous, seem to have caused the decision In one case an ideal cholecystotomy was performed, yet two months later the gall bladder had to be opened again and drainage made, on account of unendurable pain In all other cases, drainage was carried out from the outset The secretion of gall, omitting one case where it persisted several months, continued ten days to nine weeks In one case it was necessary to use a suture for fistula, this was successful One patient left the hospital before the closure of the fistula and was not seen again All the patients were again seen shortly before the publication of the work, and could bear witness to their complete recovery In no case had a hernia resulted, and in none did death occur from the operation

The earliest case occurred May 20, 1890, and one more operation the same year, the rest in 1891, 1892 and 1893—*Centralblatt für Chirurgie*

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SATURDAY MAY 4 1895

THE OFFICIAL PROGRAM

The program of the forty sixth annual meeting is now completed and was issued May 2 to the Committee of Arrangements, by whom most of the copy was furnished

The prospect for excellent Section work was never better, and the ASSOCIATION has never had a meeting which gave plainer evidences of the high scientific standard it has lately attained

Socially the attractions are many, and the hard work done by the Committee of Arrangements shows for itself in the excellence of the arrangements for the meeting We naturally would expect that a committee officered by CHISOLM, OSLER and ROHE would do credit to the Monumental City and the ASSOCIATION, and a glance at the program shows that expectation to have been well founded Gastronomically, those inclined to the pleasures of the table will reflect that the "canvas back" has its nest very near, if it is out of season, that the succulent Chesapeake oyster has never yet been accused of conveying germs of typhoid, while the terrapin, that treasure of the *gourmet*, may always be found at its best

Baltimore itself, with its historic associations, the chivalry of its men, the beauty of its women, the great extent and variety of its educational institutions, and its art gallery, make it a city to which the annual pilgrimage will be made with much pleasure and profit

The program is this year printed on the ASSOCIATION presses and the work was done by ASSOCIATION employes As a specimen of the typographical art it is very handsome, and in every detail creditable to the JOURNAL office Justice to the employes requires mention of the fact that the copy was not received until the 24th The printing was finished May 1

THE RUSH MONUMENT

At the head of our columns this week appears the portrait of the foremost American physician, DOCTOR BENJAMIN RUSH We can do little more than reiterate the sentiments of the powerful appeal made by the Committee on the Rush Monument, to the profession, to honor the memory of an American physician, at once a scholar, a patriot, a physician and a philanthropist It needs no eulogy to set forth his virtues or the splendor of his magnificent deeds

DR BENJAMIN RUSH
From a phototype from a painting by SULLY in possession of the Pennsylvania Hospital at Philadelphia Painted for the hospital shortly after his death in 1818

The history of American medicine has done that Let those now living put their hands in their pockets in the liberal spirit that should always actuate a member of this great ASSOCIATION, and end this talk at *this* meeting, by subscribing enough money to complete a monument that should have been completed long before the ASSOCIATION was founded

Blank Applications for membership in the ASSOCIATION at the JOURNAL office

THE CONVULSIVE AND APOPLECTIFORM ATTACKS OF PARESIS

The causes of the epileptiform and apoplectiform attacks of general paralysis or paretic dementia have not been adequately explained, and very few of the text-books enter into this phase of the pathology of the disease to any extent The theory of Spitzka that we have in the apoplectiform attacks an intense local congestion, amounting practically to a capillary hemorrhage, is a plausible one, but it only explains the mechanism, not the exciting cause It is easy also to assume that in the more advanced cases the general inflammatory condition of the cortex of the convexity produces a state of irritability that can readily account for convulsive discharging lesions, but this, for its part, does not make clear the absolute though temporary local or general paralysis so often observed in this disease Moreover these attacks, either convulsive or paralytic, are not so infrequently the very first manifestations of the disorder, which from the time of their appearance is plainly manifest, so that it would seem in some of these cases to have actually dated from the attack Any prior symptoms, if they existed, were too insignificant to attract attention, and cases have occurred where friends or the patient could not recall any pre-existing aberrations from the normal condition, that could rationally be connected with the seizures or the succeeding paresis

In a recent communication a prominent French alienist, M Legrain, endeavors to supply a probable hypothesis to account for the phenomena in question, by assuming a uro-toxemia of the blood, and claims that those paretics who are free from these attacks are those only who retain to the last the full functional activity of the kidneys On these grounds he maintains that paretic dementia is not exclusively a disease of the brain and nervous system, but that its lesions are also to be sought in the viscera, and in the arterio-sclerosis which forms their common bond He draws, moreover, a practical conclusion from these views, that free abstraction of blood by leeching is a useful therapeutic measure, relieving the system of the toxic products that are overwhelming the brain, and claims to have had practical demonstration of this fact

While there is a certain degree of probability in M Legrain's views, it can not be said that they are proved to be applicable in all cases of the convulsive or paralytic attacks of paretic dementia There is, with the increasingly favored view of the syphilitic or at least the parasyphilitic nature of paresis, a strong suggestion of a specific toxin acting in these cases When the attacks occur, as they do in some instances, after comparatively recent syphilis and the disorder falls under the head of what has been called syphilitic pseudo paresis, there is no difficulty in the assumption of the action of such a toxin Syphilographers have long since recognized the possibility of the sudden overwhelming, in some cases, of the nervous system by the specific poison, and this is one of the ways it might very naturally demonstrate its presence When, however, as in most cases of paretic dementia, the specific infection dates back some years and has since been quiescent, to say the least, with our present knowledge, the probability of a specific toxin may seem more remote, but the idea can not be absolutely discarded, until we know more positively the actual relations between syphilis and paresis The directly acting cause of the attacks may easily be a vasomotor disturbance, but the origin of this is the question, and the action of some poison on the governing centers seems as probable a theory as any other,

The toxin theory, whether as proposed by M. Legrain, or in other forms, has the advantage of being in accord with one of the leading lines of thought in pathology at the present time and seems, on the whole, to be as well supported by facts as any other. It has moreover, so far, the field to itself, as no other adequate one has been seriously advanced and supported

VARIOLA AND VACCINIA

At the close of the Jennerian century the question of the relation between variola and vaccinia is still unsettled, and Dr Aussft and M Barret have just furnished another interesting chapter to the controversy In view of Pasteur's discoveries the majority of savants believe that immunity against variola, as it is against anthrax, is obtained by the modification of the virulent elements attenuated by cultures or by their passage through animal organisms But since the development of the anthrax bacillus may be stopped by the presence of another microbe—the bacillus pyocyaneus—is there not some analogous action in vaccination against variola?

The experiments of the authors have been guided by these ideas As far back as 1839, Reiter had inoculated more than seventy cows with variola unsuccessfully, on the other hand, vaccinia throve on these animals In 1865 Professor Chauveau reported some very interesting facts to the Academy of Medicine which are known to all Chauveau concluded that the two viruses are absolutely independent In 1883 Berthel, of Lyons, repeated Chauveau's experiments by the intra-venous method At the same time Warlomont, of Brussels, made similar experiments and reached the same conclusions as Berthel Neither by intra-venous nor by intra-cellular injections were they able to produce an eruption having the character of the variolic pustule or the vaccinic pustule The works of Eternod, Haccius and Bollinger have not modified Chauveau's conclusions Others, however, have reserved their judgment on this question—among them Niemeyer, Kussmaul and Strumpell, Dupuy and Juhel-Renoy In their second chapter, MM Ausset and Barret cite experiments tending to show the identity of vaccinia and of variola In 1830 Ceeley and afterward Thiele obtained the transformation of variola into vaccinia In 1882 Voigt obtained in three cases the same results as the Lyonese Commission, but he interpreted them differently and saw in the experimental eruption an abortive form of variola vaccinia Vischer in 1886 argued that vaccinia is nothing but a modification of the variola virus Hime, of Bradfort, also believed this to be the case

The experiments of the authors consisted of four series 1, variolation and vaccination on separate heifers, 2, variolation and vaccination simultaneously on the same animals, 3, vaccination of the animals inoculated with variola and inoculation of the vaccinated animals with variola, 4, M Ausset, successfully vaccinated in 1890, was inoculated on both arms with lymph from variola—no result, and again, eighteen days after vaccination, with lymph from a heifer—no result The experiments confirmed Chauveau's ideas, one alone seems discordant A woman of 33, in the hospital at Limoges for cardiac disease, was vaccinated with the other patients in April A week after, she presented six characteristic swellings with the usual phenomena of vaccinia On April 16 she felt a chill, followed on the second day after by vomiting, headache and fever Finally, on the 21st, an eruption of variola appeared which ran its usual course This was not general vaccinia—error, it was claimed, was not possible

DEFENSE OF OPIUM EATING

Having regard to the attitude of Great Britain in other matters affecting her commercial interests—quarantine, for example—the medical world, outside of the "right little tight little island," will be inclined to look askance upon the conclusions of the Royal Commission, on the use of opium, just made public We are told that the inquiry of the Commission was conducted on a wide scale and the decision was practically unanimous, that more than 720 witnesses were examined, including 152 called at the desire of the Anti-Opium Society, that every care was taken to obtain representative testimony, and that the Commission record their conviction that the evidence forms trustworthy ground for the conclusions reached

And these conclusions are "That the temperate use of opium in India should be viewed *in the same* light as the temperate use of alcohol in England Opium is harmful, harmless, or even beneficial, according to the measure and discretion with which it is used"

Taken by itself, and with its qualifying phrases "temperate use," "measure and discretion," this declaration might be regarded as harmless, it would mean much or little, more or less, to different individual judgments Unfortunately, it does not stand alone, the drift of all the extracts of evidence published is in favor of the use of opium as a stimulant "In the opinion of the great majority of native medical practitioners and representatives of large influential classes, this employment of the drug is attended by beneficial results Opium eaters of fifteen to twenty years' standing appeared before the Commission They believed the habit had done them good Their appearance and vigor satisfied the Commissioners, at all events, that it had done them no perceptible harm The opium habit prevails among some of the most manly, hardworking, thrifty races of India Opium is consumed in the native army, and, the witnesses say, does no perceptible harm, and is often beneficial Opium does not appear to beget any specific disease Opium eaters bear surgical operations as well as non-consumers, and the manager of a large insurance company said that after twenty years' experience, his company charged no extra premium on the lives of moderate opium eaters"

Exact figures as to the present value of the opium export from Bombay are not at hand, but it formerly amounted to some $60,000,000 annually, of which about $37,500,000 represented net profit to the government Of late years there has been a relative if not absolute decline in the amount exported But this of course has had nothing to do with this defense of opium for "moderate habitual use," by a Royal Commission

"A STANDARD POPULATION"

The Registrar-General of England, according to *Public Health* for March, has recently emphasized the necessity, or desirability rather, of a standardizing of the population of the several European countries By this is meant that, for international uses, there shall be population with fixed age and sex distribution so that the birth rates and those of deaths and marriages may be calculated by such a standard or "norm" It is pointed out by him that as the sex and age distribution of the population varies markedly in different nations, and as the rates largely depend upon such distributions, the rates in one country can not safely be compared with the rates in another, without correction for these differences in the constitution of the several compared populations

A high birth rate, for a time at least, increases the death rate, but in ten or fifteen years, if there is no considerable emigration of young persons, the death rate will diminish, inasmuch as there will then be a large proportion of persons between the ages of 5 and 25 years during which age periods the incidence of mortality is at its lowest Again, a population that has a large proportion of elderly persons will, other conditions being equal, have a higher death rate than a population having fewer aged people

"Private Colleges"—The dislike to give credit to a rival publication, which is an idiosyncrasy of some editors, occasionally causes a comical evasion Thus, an English contemporary, using the Journal's elaborate statistics of Medical Colleges and Medical College Attendance in the United States[1], has the following item "In 1892 there were 15,339 medical students in 98 public colleges in the United States, and nearly 18,000 in the 117 public and private colleges In 1894 the number had risen to 17,701 in the public colleges and 21,186 in the public and private" The Journal does not understand the distinction here made between "public" and "private" colleges What the Journal said—page 992, Dec 29, 1894, was that, "Through the courtesy of the Deans and Registrars of 98 out of the 117 existing regular medical colleges in the United States and Canada," etc The classification of these schools into '98 public colleges" and "19 private colleges" gives an air of originality to the item, to which the editor is entirely welcome

CORRESPONDENCE.

Handwriting of the Insane

PHILADELPHIA, PA, April 18, 1895

To the Medical Profession —With a view to especially important scientific results, I am studying the handwriting of the insane, and request your aid by way of the loan of documents, letters or written memoranda, or information having bearing upon the subject

My especial desire is to obtain a given form of letter from ten persons, suffering from different degrees of insanity, such as melancholia, hallucination, paresis, etc, any and all writing that will be of interest in the investigation

In return for your kindness and help, I will forward to you, free of charge, a full and complete report, together with drawings, diagrams, etc, embracing a full description of my work, which will be of use, help and value to not only the medical fraternity, but to humanity in general

Please note on each specimen of writing, the duration of the malady or disorder, together with any miscellaneous information which you feel will be of aid to the purpose in view

All information sent will be held sacredly confidential

Very respectfully yours,
RUFUS C HARTRANFT

Fifty Years in one Place

CLYDE, N Y, April 30, 1895

To the Editor —As you seem to desire, for some purpose, the photographs of the members of the Association I send mine with the announcement that the past winter completes my fifty-first year in practice—fifty years of married life, and fifty years residence in the same house

If any member of the Association can boast of as many semi centennial anniversaries of a like character, I would like to see his name in print

I also became a member of the Association at its meeting in New York City in 1864, the year of the election of its veteran founder, Dr Davis, as President

Yours truly, D COLVIN, M D

SOCIETY NEWS.

Ophthalmic Instruments —A *table* will be provided in th meeting room of the Section on Ophthalmology, for th purpose of exhibiting new instruments or preparations tha have been invented or brought forward by members of th Section H V WURDEMANN, Secretary

License to Practice in Pennsylvania.—The State Board o Medical Examiners, representing the Medical Society of th State of Pennsylvania, will meet in Philadelphia, corner o Broad and Pine Streets and in Pittsburg Council Chambers on Tuesday, June 18, 1895, at 2 P M to examine applicant for license to practice medicine in Pennsylvania Blan applications and all necessary information can be obtaine from the Secretary of Internal Affairs, Harrisburg, Pa

H G McCORMICK, M D, President of Board

Windham County (Conn) Medical Society —Sixteen towns representing the leading practitioners in each township met in Windham, Tuesday, April 23, for the one hundre and second annual meeting of the Windham County Medical Society The following officers were elected President F A Morrill, Putnam, Vice President, F E Guild, Windham, Secretary, W H Judson, Wauregan, County Reporter N Hibbard, Danielsonville, Censors, Lowell Holbrook Thompson, T M Hills, Willimantic, E H Davis, Plainfield Fellows to Connecticut Medical Society meeting at Hartford, May 25 Chairman, C J Fox, Willimantic, J Kent Putnam, S B Overlock, Pomfret, C E Hill, Killingly, L Holbrook, Thompson, alternates, T R Parker, Willimantic, Omer LaRue, Putnam, J H Tanner, Brooklyn, W A Darling, Killingly, W H McIntosh, Thompson Delegates to American Medical Association in 1896 T M Hills, Willimantic, E A Hill, Killingly, essayist, A D David, Willimantic, alternate, R C White, Willimantic Delegates to various county medical associations in 1896 C J Fox, Hartford, J B Kent, New Haven, F A Morrill, New London, F E Guild, Litchfield, E H Davis, Tolland, W H Judson, Middlesex, T R Parker, Fairfield The annual essay was read by Dr W H Judson on "Dosimetric Medication" It was a very interesting paper and called out general discussion An obituary on the death of the late Dr W J Lewis, of Moosup was read by Dr Davis, of Plainfield, and appropriate resolutions were passed The following new members were elected Dr G A LeClarr, Danielsonville, Dr W J McIntosh, Thompson, Dr S B Oldershaw, Pomfret Dr J A Coogan, of Hartford, was present as delegate of the Hartford County Medical Society It was voted to hold special meetings at Pomfret in June and at Danielsonville in September and the next annual meeting at Putnam The annual dinner, at the Hooker House, was an interesting feature of the meeting

An Appeal to the Medical Men of Illinois —The Executive Committee at a recent meeting decided to issue an appeal to the physicians of the State of Illinois, through their different medical societies and through individual members of the profession, urging upon them the necessity for prompt organization of the profession in the State It is a fact that the State Medical Society of Illinois has fewer members than the State societies in other States, with perhaps two or three exceptions, This is due, no doubt, to the apathy of the profession in the matter of organization The medical profession of this State can advance their interests in no surer way than by speedily forming themselves into compact societies, county, State and National, under the authority of the organizations already established, and the committee respectfully urge that every member of the regular profession in this State see to it that he is speedily enrolled as a member of the State Society There are over seven thousand physicians in the State, and less than seven hundred members of our society What wonder is it that a request of the profession as voiced through the State Society, receives so little attention at the hands of our Legislature? But let the Legislature once be apprised that the profession of our State are united, and that they request the passage of a certain measure in the interests of public health, of humanity, or of the profession, and it will be very speedily responsive to such request Not only are these material interests best subserved by organization, but as well the science in which we are all working which requires that those engaged in the same department of science shall frequently compare notes and transmit the result of their observations to their fellows through the regular channels of communication Will you not dear Doctor, aid in this great work of organization and become one in the active ranks of those who are enlisted in the cause of scientific advancement? The cost is but a trifle—the reward is great *Send your name and formal application for membership to the Secretary of this Society, or to the Treasurer, as soon as possible* It is not absolutely necessary that you shall attend the meeting Your name, your influence and your support, and such contributions as you may from time to time choose to publish in the Society Transactions are necessary in order to give the medical profession of Illinois the same prominence, character and respect as is accorded to our profession in most of the other States in the Union State pride as citizens, no less than professional pride as physicians, should induce all members of the regular profession to at once enroll themselves as members of the organized State Medical Society, and if need be to make some sacrifices to that end

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[1] Journal of the American Medical Association, Dec 29, 1894, Jan 12, 1895

JOHN B HAMILTON, Permanent Secretary

Association of Military Surgeons—The fifth annual meeting of this body will be held at Buffalo, N Y, May 21 to 23, 1895 The general headquarters will be at the Iroquois Hotel, where provision will be made for registration The Committee of Arrangements has provided for the entertainment of the members and their friends On the evening of Tuesday, May 21st there will be a conversazione at headquarters, on Wednesday a reception, on Thursday a carriage drive to various points of interest in the city, a promenade concert and a review of the 65th Regiment N G N Y On Friday, leaving Buffalo at 9 30 A M there will be an excursion to Niagara Falls and probably on to Fort Niagara, to afford the members an opportunity of seeing the various points of interest at the great cataract, including the electric power plant, the battle grounds of Lundy's Lane, Queenstown Heights and other interesting places Members are expected to be in undress uniform during the day and in full dress, including side arms at evening entertainments In connection with the meeting there will be an attractive exhibition of surgical instruments, dressings and appliances in which most of the leading houses of the United States will be represented Addresses of welcome will be made by Hon Edgar B Jewett, Mayor of the city, Hon Levi P Morton, Governor and Commander in-Chief of the National Guard of the State of New York, and by Dr Roswell Park, President of the State Medical Society Major Albert H Briggs, N Y N G, is Chairman of the Committee of Arrangements The following papers have been promised for the meeting The President's address by George M Sternberg, Surgeon General, U S Army Report on the Status of the National Guard by Colonel Nelson H Henry, Assistant Surgeon General N Y N G Experiments illustrating the degree of powder burn, as modified by the distance of the object, size and conformation of the bore, amount and standard of the powder and other practicable demonstrable causes, by Louis A. La Garde, Captain and Assistant Surgeon, U S Army The location and removal of missiles from the cranial cavity, by George R Fowler, Major and Surgeon, N Y N G On litters, by John Van R Hoff, Major and Surgeon, U S Army and E T T Marsh, Major and Surgeon, 71st Regiment, N Y N G Ambulance construction, by Dallas Bache, Colonel and Assistant Surgeon General, U S Army and C R Greenleaf, Lieut Colonel and Deputy Surgeon General, U S Army Conservative surgery on the battle field, by Colonel Nicholas Senn Ill N G The relation of concentrated food to active service demands, by Charles Smart, Major and Surgeon U S Army The location of sites for, and the construction of military posts in relation to proper sanitation, by Dallas Bache, Colonel and Assistant Surgeon-General, U S Army The relation of naval architecture to proper sanitation, by J R Tryon, Surgeon General U S Navy On the value of bromin in military surgery, by M O Terry, Surgeon General New York The handling and care of wounded on shipboard, by A C H Russell, E R Stitt and A M D McCormick, Passed Assistant Surgeons, U S Navy The post exchange from a medical standpoint, by Philip F Harvey, Major and Surgeon, U S Army Infected bullets, by Louis A La Garde, Captain and Assistant Surgeon, U S Army Fifty two amputations of the thigh, by John D McGill, Surgeon General, New Jersey Instruction of the Hospital Corps, by H S Turrill, Major and Surgeon, U S Army The surgeons general of the militia, by George Cook ex Surgeon-General, New Hampshire Field hospital service, by Dallas Bache, Colonel and Assistant Surgeon General, U S Army Some experimental work with the new ball, J D Griffith, ex Surgeon General Missouri Gunshot wounds of the kidneys by A L Wright, Lieut-Colonel and Surgeon, Iowa N G On the travois litter, by Vladimir F De Niedman, Major and Surgeon, Kan N G Service of the National Guard of the State of New York during the Buffalo strikes of 1893, by Lewis Balch, Major and Surgeon N Y N G The National Guard of the State of New York during the recent Brooklyn strikes, by William E Spencer, Major and Surgeon, N Y N G Service of the Illinois National Guard during the Chicago strike, by Charles Adams, Major and Surgeon, Ill N G Method of caring for wounded on the field and in hospitals of Chinese and Japanese armies, by C U Gravatt, Surgeon U S Navy Scorbutic manifestations in young subjects, by John C Wise, Surgeon, U S Navy Asepsis in military service, by Eduard Boeckmann, Assistant Surgeon-General Minn N G A medical officer in the volunteer army, by F W Byers, Surgeon-General, Wisconsin The Merriam pack, by Lewis Balch, Surgeon, N Y N G The prevention and suppression of dangerous contagious diseases in garrison and in the field, by H Lincoln Chase, Assistant Surgeon, Mass V M Heat and sunstroke at camps of instruction, by Orlando J Brown, Mass V M The mental evolution of the citizen soldier, by Charles W Galloupe, Assistant Surgeon Battery A, Mass V M A diagnosis tag for field use, by Wm H Forwood, Lieut Colonel and Deputy Surgeon-General U. S Army Some interesting papers also are expected from committees appointed at the meeting in Washington, D C, last year

International Congress of Dermatology—The Third International Congress of Dermatology will be held in London, August 4 to 8, inclusive, 1896

Officers President, Jonathan Hutchinson Vice-Presidents, (*a*) British the President of the Royal College of Physicians, the President of the Royal College of Surgeons, the President of the Royal College of Physicians of Ireland, the Director-General of the Medical Department of the Navy, the Director General of the Medical Department of the Army Sir William H Broadbent, Bart, Sir Joseph Lister, Bart, Sir James Paget, Bart, Sir Richard Quain, Bart, Sir Dyce Duckworth, Sir Douglas Maclagan Sir Edward Sieveking, Mr Alfred Cooper, Drs G F Duffey, McCall Anderson, Hughlings Jackson, Allan Jamieson, Robert Liveing, Payne, Pye Smith, Herman Weber, Wilks

(*b*) Foreign France, Dr Besnier, Professor Fournier, Dr Hallopeau, of Paris, Professor Leloir, of Lille

Germany Professor Kobner and Professor Lassar, of Berlin, Dr Unna, of Hamburg, Professor Neisser, of Breslau, Dr Veiel, of Cannstadt

Austria Professor Kaposi Professor Neumann, Professor Lang, Professor Hans von Hebra, of Vienna, Professor Schwimmer, of Buda-Pesth, Professor Pick and Professor Janovsky, of Prague, Professor Jarisch, of Gratz

Russia, Professor Petersen and Professor Tarnovski, of St Petersburg, Professor Pospelow, of Moscow

Italy Professor de Amicis, of Naples, Professor Pellizari, of Florence, Professor Campana, of Rome

Norway Professor Boeck, of Christiana

Denmark Professor Haslund, of Copenhagen

Professor Castello and Professor Olavide, of Madrid

Balkan States Professor Kalindero, of Bucharest

Turkey Zambaco Pacha

Greece Professor Joannu, of Athens

United States Dr L A Duhring, of Philadelphia, Pa, Dr White, of Boston, Dr J Nevins Hyde, of Chicago, Dr L D Bulkley, Dr E L Keyes and Dr Fox, of New York

Canada Dr F Shepherd, of Montreal, Dr Graham, of Toronto

Treasurer, Mr Malcolm Morris Executive Council Chairman, Mr Hutchison Vice Chairman, Dr Colcott Fox

Members Drs McCall Anderson, Brooke, Fitzgibbon, A J Harrison, Allan Jamieson, Payne, Perry, Sangster, Pye Smith, Simon, Walter G Smith, Stowers, Thin Messrs William Anderson, Alfred Cooper, Ernest Lane, Sheild, Shillito, Waren Tay Ex-officio members chairmen of committees, the Treasurer, the Secretary-General,

Committees (*a*) Reception, Chairman, Dr Radcliffe Crocker Members, Drs Brooke, Colcott Fox, Keser, Bowles Mr Lane, Mr 'Sheild

(*b*) Museum and Demonstration, Chairman, Dr Stephen Mackenzie Members, Dr Abraham, Messrs William Anderson, Hutchinson, Jr , Drs Perry, Stowers , Mr Tay

(*c*) Bacteriological, Chairman, Dr Sims Woodhead Members, Drs Délépine, Galloway, Manson, Ruffer, Thin , Mr Andrew Pringle

Ex officio members of all committees the President, the Treasurer, the Secretary-General

Secretary to Section for Syphilis, Mr Ernest Lane

Foreign Secretaries
France, Dr Feulard, of Paris
Germany, Dr Rosenthal, of Berlin , Dr Taenzer, of Bremen
Austria, Dr Riehl, of Vienna
Belgium, Dr Dubois Havenith, of Brussels
Denmark, Dr Nielssen, of Copenhagen
Hungary, Dr Torok, of Buda-Pesth
Portugal, Dr Zeferino, Falcao of Lisbon
Holland, Dr Van Haren Nomann, of Amsterdam
Sweden, Dr Welander, of Stockholm
Switzerland, Dr Muller, of Zurich
Italy, Professor Tommasoli, of Modena
Spain, Dr Padro, of Madrid
Roumania, Dr Petrini de Galatz, of Bucharest
Agentina, Dr Baldomero Sommer, of Buenos Ayres
Australia, Dr Finch Noyes, of Melbourne
Egypt, Dr Sandwich, of Cairo
United States, Dr George T Jackson, of New York
Brazil, Dr Silva Araujo, of Rio de Janeiro
Chili, Dr Valdés Morel, of Santiago
China, Dr Neil Macleod, of Shanghai
West Indies, ———

Secretary-General, Dr J J Pringle, 23 Lower Seymour Street, London, W

REGULATIONS

1 All duly qualified medical men, British or foreign, or others interested in science, invited by the Council, who shall have paid the fee of £1 sterling,[1] and who shall have enrolled themselves, shall be members of the Congress and entitled to the Volume of Transactions

2 The official languages of the Congress shall be English, French and German, but with the permission of the President, members may express themselves in the language with which they are most familiar

3 The proceedings of the Congress shall be embodied in a Volume of Transactions, edited by the Executive Council

4 Communications relative to membership, papers, or other matters connected with the Congress, should be addressed to the Secretary-General, Dr J J Pringle, 23 Lower Seymour Street, London, W , or to one of the Foreign Secretaries

5 The fee for membership shall be payable in London, at or before the opening of the Congress

It will greatly facilitate the work of the Executive if the fee is forwarded as soon as possible after May 1, 1896

6 Members who are unable to attend the Congress shall receive the Volume of Transactions

7 The subjects treated shall be of two orders 1, those selected beforehand by the Executive Council and introduced by gentlemen chosen for that purpose by the Council , 2, those selected by individual members themselves

8 Subjects selected for debate by the Council shall take precedence over those selected by the members

9 The sittings of the Congress shall take place from 11 to 1 in the forenoon, and from 3 to 5 in the afternoon, of each day

10 There shall be clinical demonstrations of patients every morning from 9 to 10 30, and every afternoon from 2 to 3

11 Members contributing papers must submit an abstract of them to the Secretary-General on or before May 1, 1896, which will be printed either in full or in part, and embodied in the general program of the Congress which will be distributed at its opening

12 At every debate, precedence will be given to gentlemen who have communicated beforehand their intention to take part in it

13 No papers lasting more than twenty minutes will be permitted Speeches will be strictly limited to ten minutes each MSS of the papers read must be left with the Secretary-General before the end of the sitting The Executive Council shall decide as to the entire or partial publication of such papers in the Transactions of the Congress

J J PRINGLE, Secretary-General

Chicago Ophthalmological and Otological Society—Regular meeting held at Saratoga Hotel, March 12, 1895, DR HOTZ in chair There were sixteen members and visitors in attendance

The minutes of the last meeting were read and approved

DR GAMBLE showed a case of voluntary nystagmus Patient was a man, 24 years old, always well No eye trouble in family Could voluntarily cause a marked lateral nystagmus by looking at an object about ten feet away The movements are more rapid than in most cases of involuntary nystagmus The movements last only about a minute and then another effort is necessary to call them forth V in each eye =20-20, no asthenopia, never had headaches, fundi normal The nystagmus is never involuntary

DR COLEMAN showed a negro porter about 28 years old, first seen some months ago, with marked secondary syphilis and with papillomata on corneal limbus All symptoms disappeared under mixed treatment, but patient left before cured Now returns with another outbreak and papillomata on limbus and on upper lid They are sharply defined, about 1 millimeter in diameter Much photophobia and lacrymation

DR DODD reported a case of corectopia and notching of both lenses Mrs S , age 35 years Right pupil is displaced upward and inward , left is normal in position and reaction , both irides tremulous , both lenses displaced downward and backward and irregularly notched in upper part, this being due to lack of zonule at these points Vision each eye = fingers at three feet , right with — 16 D = 20 200 , left not improved with glasses because of choroidal atrophy She has a brother with double corectopia

DR HOTZ had seen a case where both lenses were dislocated upward and the lower border of each was notched

DR PINCKARD had a case where both lenses were dislocated down and in, and the upper border of each had a smooth notch about 1 millimeter deep

DR HOLMES had seen a case with Dr Kipp, of Newark, where there was a notch both above and below

DR CASEY WOOD read a paper on "Septic Embolism of the Retinal Arteries," and reported two cases The first was puerperal, both eyes were lost by panophthalmitis but the patient did not die In the second case only one eye was lost As a rule where the general sepsis is marked, the trouble in the eye precedes death only a short time

DR HOTZ thinks such cases must be rare because during service in a general hospital, he had seen a great deal of pyemia but never a case of septic embolism in the eye, except one case from puerperal cause

DR COLEMAN had had two cases in both of which death had occurred shortly after panophthalmitis set in

DR WESTCOTT had two cases in which death occurred and one where the eye trouble started while the patient was convalescing from pneumonia The eye was enucleated and patient recovered

DR COLBURN had a girl, 17 years old who in December, 1894 had tonsillitis with ulceration During this time she became blind First seen three weeks later Marked neuroretinitis with hemorrhage which has slowly cleared and now V=20-60 Dr Colburn also showed a water color of an unusual form of albuminuric retinitis He reported a case of girl injured two years ago , Now, O S $V = \frac{1}{6}$, field about one-fourth size of normal , loss of sense of smell and taste , hearing about one-ninth , monocular diplopia O D V= 20-20 , field is normal There is anesthesia of right arm and left leg

DR COLEMAN thought there might be some organic lesion

DR GRADLE thought it was a typical case of hysterical amblyopia as described by Charcot Prognosis is bad

DR WOOD also thought it was hysteria and prognosis is bad

DR HOTZ thought a normal fundus after two years was against an organic lesion

DR WILLIAMS referred to a recent case in *New York Med-*

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[1] The equivalent of £1 sterling is French, 25 francs, German, 20 marks, Italian, 25 lire, American, 5 dollars,

ical Record Boy, 11 years, had neuro retinitis and at the time his color sense was much disturbed After neuro retinitis disappeared color sense became normal Dr Williams thought this suggested that the retina was the seat of change in abnormal color vision

Dr Hotz had a strong man, 28 years old, who on August 27, about 10 A M found right eye suddenly blind About ten minutes later, could see light Dr Hotz examined him about 12 o'clock Lower field gone and upper field contracted Retina was hazy above macula, the haze having a sharp edge Superior artery was large to first branch, from there on was empty Next day marked edema of retina above and vessels very small Third day, a hemorrhage in upper nasal part Massage was employed every day Patient disappeared but came under Dr Wood's care some days later Massage continued and an iridectomy done Field increased in size and central vision = 20 20 Vessels continued thread like

Dr Pinckard had seen a case of embolism of the superior artery where the embolus did not entirely occlude the vessel and the blood moved slowly along in a broken column On the third day the arterial circulation was completely restored At no time was the blood column in the veins broken There was marked edema of retina but no hemorrhages The patient recovered entirely without treatment

On motion, Society adjourned

C P Pinckard, Secretary

103 State Street

NECROLOGY

John P Wall, M D—The Editor has received from a mutual friend, the following statement of the sudden death of the late Dr John P Wall, of Tampa, Fla , long a member of our Association, and a gentleman of high standing in his community and State The record of his service during the Tampa yellow fever epidemic, in which he served faithfully as one of Surgeon General Hamilton's assistants having immediate charge of affairs in Hillsborough County, is a bright chapter in sanitary annals As will be seen, his death occurred while reading a paper on hygiene before the Florida State Medical Association

'Perhaps the electric spark has already conveyed to you the sad intelligence of Dr Wall's sudden death If it has, then I am late in my announcement but not late, I know, in giving you some of the details of the unhappy ending of one of Florida's brightest and most illustrious physicians He truly died in harness and was at labor in his chosen and loved profession up to the very moment when the summons came The Florida Medical Association was in annual session at Gainesville and it was the third day of the session Dr Wall had been announced in the Section of Hygiene to read a paper on "Public Health in the Light of Recent Observations and Experiments," and 9 30 A M , the 18th instant had been made the special hour and order for its delivery The Doctor was a little late getting to the hall, having been to see some patients with Dr Lancaster of Gainesville, but he arrived before the appointed hour He appeared in his usual health that morning and in fact said to some friends that he never felt better He began reading, standing, but appeared much agitated and very nervous, as was manifested by a restless moving of his right hand, he holding his article—which was in printed proof sheet in his left hand He was pale and his voice trembled, which I in common with other members ascribed to a timidity (stage fright) which the Doctor always manifested when addressing an audience He had read but a few sentences when he sipped water and then seemed to recover his self possession, but the agitation returned soon again with increased pallor and he again drank water, remarking *sotto voce* to those near him that "high teas" and "tony" entertainments did not agree with him (alluding to the reception of the night before) but he did not complain otherwise, then, of feeling badly It was soon apparent (in fact I noticed it as soon as he began his paper, and remarked the fact to Dr Daniel sitting in front of me) that there was something wrong with the Doctor, and Dr Caldwell called to him to take a seat He seemed to understand and reached for a chair near by him but sitting on the arm of the chair and slipping off, he fell on the floor He gasped several times, had a convulsive twitching of the corner of his mouth, and hands, and was dead As he fell the pallor was changed to venous congestion of face and neck and a very few minutes after death was pronounced, his ears and back of neck were very decidedly blue I judge he had been reading about eight or ten minutes when he died There was no post-mortem , as but an hour or two remained to perfect arrangements to take the body home in time for the train

"The shock was a great one to us all, and I think it is the first occasion (the first that I know of) where a medical man in a medical convention and reading a medical paper drops dead and, as I said at the beginning of my letter, he truly died in harness He never spoke after he stopped reading and made an effort to be seated " Yours truly,

Josiah Y Porter, M D

John Blackmer, M D , of Springfield, Mass , died April 15, aged 67 years He was born in Plymouth, and was graduated in medicine at Harvard University in 1854 In the late war he served as surgeon with the Forty seventh Massachusetts Volunteers, whence he was transferred to a position as assistant surgeon in the U S Navy After the war he became superintendent of the New Hampshire Asylum for the Insane He was prominent in prohibition politics, both in the State last named, and later in Massachusetts

Elon J Lawton, M D , of Rome, N Y , died April 18, in his sixtieth year He was a graduate from the Albany Medical College, in the class of 1858 For the past four or five years he had been a member of the common council of the city named, and formerly for the period of twelve years ending in 1882 he had been the coroner of Oneida County

Joseph L Wade, M D , of Irvington, N J , died April 20, aged 66 years He was graduated in medicine at the New York University, when he was 21 years of age, and soon thereafter established himself in practice in his native town He had been health officer of the village for ten years, and was one of the best known citizens, having been born in the township at the outskirts of the old village, and lived there constantly except during the four years he served as a surgeon in the Thirteenth New Jersey Volunteers at the front He was a steady contributor to the Newark papers, and at one time published a paper called the *Irvingtonian* He leaves a widow

Joseph Rowland, M D , the oldest practicing physician in Delaware County, died at his home on Front Street, Media Pa , April 29, with pneumonia He was in the eighty-first year of his age and had been in active practice in this county for fifty five years He was a graduate of the University of Pennsylvania of the class of 1840 His entire life was given up to practice, and he leaves considerable property He was a man wonderfully preserved for his years and was seen almost daily riding on horseback, his usual mode of travel Dr Rowland was twice married, his first wife, who died about twelve years ago, being Jane R Eaves Six children from this marriage are living, all married and heads of families They are Dr Frank Rowland, Dr Beecher Rowland, Mrs Mary Kater Mrs Charles Myles all of whom reside in California, and William E Rowland of Media, and Mrs Sarah Garrett, of Westtown Four years ago Dr Rowland married his second wife Anna Howard, of Media, who survives him He had a wide acquaintance and many family connections in the county, and was held in high esteem, both as a citizen and a physician

Isaac Wayne Hughes, M D , died at his home in Philadelphia, April 26 He was the second son of Benjamin B Hughes, and was born in 1831, near Norristown, Pa , where he received his early education He had among his schoolmates and intimate friends of early youth the late Generals W S Hancock and John F Hartranft He entered the medical school of the University of Pennsylvania in 1849, and was graduated in 1852 He began the practice of his profession at Sunbury, Pa , where he married Alice, daughter of the late Judge Charles Donnel, and, after a short residence there, in the year 1851, he settled in West Philadelphia, then a scattered village, locating at Fortieth and Chestnut Streets, where he continued to reside, actively engaged in the practice of his profession, until prostrated by his fatal illness, which confined him to his bed since about March 1 Dr Hughes was not only a successful practitioner of medicine endeared to his large clientage, not only for his skill and experience, and also by a pleasing personality of manner, but he was likewise an enterprising business man, and assisted in the improvement of that part of the city by the erection of a number of dwelling houses He also organized the West Philadelphia Bank in 1869, of which he was the first and only President, and was also the President of a recently organized incinerating company He had been for many years a member of the Philadelphia County Medical Society, and had been for a period of forty years a vestryman of St Mary's Protestant Episcopal Church

He numbered among his personal friends such distinguished men as the late Anthony J Drexel, Chief Justice Ellis Lewis, Admiral Porter and Hon Richard Vaux He leaves a widow, a son, Dr Donnel Hughes, and three minor children

J M PRICE, M D, of Brazil, Ind, April 19——Edward Shippen, M D, of Baltimore, Md, April 22——Russell Caulkins, M D, of Cleveland, Ohio, April 21——Francis A Slater, M.D, of Chicago, April 24, aged 78——J C Humphreys, M D, of Greensburg, Ind, aged 79 years——William A Lewis, M D, of Moosup, Conn, April 20, aged 66 years——J G Schnebly, M D, of Topeka, Kan, April 24, aged 65——Moses R Greeley, M D, of South Weymouth, Mass, April 23, aged 68——R M Lackey, M D, of Oak Park, Ill, April 29, aged 59——Frederick Andros, M D, of Minneapolis, April 28, aged 92 years——Ezra Stetson, M D, of Princeton, Ill, April 28, aged 78——F Thomas, M D, of Racine, Wis, April 23, aged 29

PUBLIC HEALTH

Typhoid in the Milk Can —Secretary Lindsley of the Connecticut State Board of Health has run down the origin of a series of 164 cases of typhoid fever, all occurring among the patrons of one milkman in the town of Stamford, Conn Inspection of a number of dairies from which this milkman obtained his supply revealed nothing suspicious, but the water of the well on his own premises—used for cleansing his cans and possibly for increasing the volume of his supply—was found to contain 69,660 bacteria to the cubic centimeter Examination of a number of other wells in the vicinity also showed gross contamination and these have all been ordered to be filled up, and the milkman was at once forbidden to furnish any more milk

Vaccination by Scratching —Dr H Masson, a French military surgeon, up to last November had always used scarification as a means of inoculation with vaccine virus He then abandoned it for a scratching method The lancet, charged with the vaccine matter, is held almost perpendicularly to the arm between the thumb and the index, so as to use the point only Then at the site chosen he scrapes the skin many times and very superficially, giving the instrument a slight to-and-fro movement from left to right and from above down By this means only the epidermic cells are taken away The vaccinal matter is spread out over this area and the garments are not replaced for eight to ten minutes The results have been very satisfactory Like M Rafinesque, the author speaks of the enormous volume of the pustules and the severity of the inflammatory phenomena With a view to reducing these, Masson limits the surface to be inoculated to about 2 millimeters square, thus obtaining pustules averaging 6 to 7 millimeters [1]

School Hygiene —On account of the small size of the plot of ground on which a public school in New York City is to be built, the architect has been told to build an out-doors playyard on the roof Following are some of the novel features in the Henry Street school, which will occupy a space of 190 by 100 feet the playground will be on the roof It will contain 10,000 square feet of space, equal to four city lots On the south, east and west sides, the playground will be protected by the roof, which will extend fifteen feet above the level of the playground To the south, the view will be unobstructed, and protected only by a wire netting It will be covered with a wire netting to prevent children from throwing missiles into the street The playground on the roof will only increase the cost of the structure about $4,000 As the total cost is to be about $200,000, the additional outlay is a mere trifle, when the benefit to the pupils is taken into consideration The first floor will contain an indoor playground The floor will be of asphalt The second, third and fourth stories are to be devoted to class-rooms, with sixteen on each floor On the fifth floor will be the manual training school Here there will be a gymnasium and cooking rooms, with kitchen and ranges, for girl pupils, who will be inducted into the mysteries of culinary art The most unique feature will be the location, in the basement, of thirty shower baths for the free use of pupils The bath suggestion has not been fully decided upon, but the plan has been submitted to the Board of Education, with indications that it will be adopted It is possible that shower baths may not be built and that a big plunge bath may be substituted

Illinois State Board of Health —This body held its regular quarterly meeting in Chicago, April 30 and May 1 and 2 A number of questions concerning the recognition of medical colleges were discussed, but final action is not yet announced The Secretary's report on contagious diseases shows that there were 105 smallpox centers outside of Illinois during the quarter and 26 points in the State with 90 cases and 15 deaths The close of the epidemic in Chicago is dwelt upon, as already noted in the JOURNAL of April 13 A resolution was unanimously adopted by the Board, indorsing the administration of Dr Arthur R Reynolds, Commissioner of Health of Chicago, in which it is recited that he found "a practically unvaccinated community, requiring within the two years a total of 1,119,320 public vaccinations, more than one-half of which were performed within a single month, the hospital facilities were disgracefully and dangerously inadequate, there was no ambulance service, nor corps of trained assistants, nor appropriations to secure any of the essentials necessary to deal with an outbreak of a highly contagious and malignant disease" These difficulties were overcome and the outbreak was suppressed with a mortality of about 60 per cent of the epidemic of 1871 74, of less than 45 per cent of that of 1862-64, and of 26 per cent of the great epidemic of 1880 83 The Board characterizes this wholesale immunization and its results as "an unparalleled achievement of sanitary administration"—"a triumph of preventive medicine which fitly closes the first century of Jenner's discovery"

Eucalyptus-Oil Disinfection in Scarlet Fever —In a paper read before the Epidemiological Society March 15, ult, Dr Joseph Priestley, the well-known medical Officer of Health of the much quoted town of Leicester, Eng, details the results of his investigation of the use of eucalyptus oil as a disinfectant in scarlet fever—a method of treatment originally proposed and enthusiastically advocated by J Brendon Curvengen of Teddington, and indorsed *pro tanto*, by publication in the Transactions of the Society The treatment, as detailed, consists in the use of eucalyptus oil in a compound known as "oleusaban," which appears to be a proprietary article said to be composed of the essential oil of eucalyptus globulus with thymol and other camphors and aromatic disinfectants in solution This is used by careful rubbings with the oil over the whole body three times a day for three days, followed by one rubbing after a warm bath daily for seven days The disinfectant is sprayed also into the patient's throat, mouth and nose and diffused into the air of the room No eucalyptus is administered internally beyond what passes down into the stomach during the spraying process In brief, Dr Priestley's results with 120 patients thus treated—as compared with 161 cases treated in the usual orthodox way at the same time in the same hospital and under precisely similar conditions—were a lower death rate, a shorter stay in hospital, slightly fewer complications of a serious nature, and fewer "return" cases Mr Curvengen, in a corroborative communication to the *Lancet*, April 13 adds that the figures show that desquamation was hastened, so that patients thus treated were discharged from hospitals a week earlier than others, that there were few or no deaths —the deaths were 1 6 per cent instead of 4 3 per cent under other treatment—and maintains that the cases with suppurative complications were about the same as under other treatment and that these are due under all forms of treatment to hospital infection by the streptococcus pyogenes and that few or none of these complications occur in private practice, citing the statement, in his paper before referred to, that he had treated 156 cases in their own homes at Bexley, without any suppurative complications Mr Curvengen suggests that the questions to be decided by those who are investigating this mode of treatment are 1, does it check or stop infection? 2, does it lessen or shorten the fever? 3, does it shorten the period of desquamation? 4, does it prevent albuminuria? 5, does it reduce the number of deaths? And adds "I, as well as many others say it does all this, and it is for its opponents to prove by adequate experience that it does not"

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[1] Arch de Med Militaires

Health Reports —Sanitary reports to the Supervising Surgeon General, Marine-Hospital Service

SMALLPOX—UNITED STATES

Arizona Nogales, April 23, 2 cases

Arkansas Garland County (including Hot Springs), February 1[1] to April 22, 192 cases, 44 deaths

Indiana Jeffersonville, April 24, 1 case, 1 death, Clark County, April 24, 3 cases, 1 death, Perry County, April 24, 3 cases

Kentucky Henderson, April 26, 1 case

Louisiana New Orleans, April 13 to 20, 1 case

Maryland Charles County, April 27, 2 cases

Michigan Smallpox reported at Detroit, Grand Rapids and Brownstown Township, during week ended April 20

New Hampshire Newport, April 24, 1 case

New Jersey Union Township, Bergen County, April 20, 1 case

Ohio Cincinnati, April 19 to 26, 5 cases, 3 deaths

Wisconsin Springville, April 8 to 22, 1 case, Lawrence Township, April 8 to 22, 1 case, De Pere Township, April 8 to 22, 3 cases, 1 death, Granville Township, April 8 to 22, 1 case, Milwaukee, April 8 to 22, 16 cases, 1 death, April 20 to 27, 5 cases, 2 deaths

SMALLPOX—FOREIGN

Bohemia Prague, April 1 to 6, 5 cases

Brazil Rio de Janeiro, March 9 to 16, 2 deaths, Santos, March 9 to 16, 7 cases, 3 deaths

Cuba Havana, April 11 to 18 6 deaths

England Birmingham, April 6 to 13, 1 death, Leeds, April 6 to 13, 1 case

Holland Rotterdam, April 6 to 13, 5 cases, 2 deaths

India Calcutta, March 9 to 16, 163 deaths, Singapore, December, 1 death

Ireland Dublin, April 6 to 13, 2 deaths

Italy Bologna, April 6 to 13, 1 case

Mexico Acapulco, April 6 to 13, 3 deaths, Nogales, April 23, 8 cases

Russia Moscow, March 23 to 30, 2 deaths, Odessa, March 31 to April 6, 6 cases, 1 death, St Petersburg, March 31 to April 6, 6 cases, 1 death

YELLOW FEVER—FOREIGN

Brazil Rio de Janeiro March 9 to 16, 20 deaths, Santos, March 9 to 16, 50 cases, 48 deaths

Cuba Havana, April 11 to 18, 2 cases, 1 death

Mexico Vera Cruz, April 11 to 18, 1 death

CHOLERA—FOREIGN

India Calcutta, March 9 to 16, 45 deaths, Madras, March 16 to 22, 1 death

MISCELLANY

Change of Address —Dr Martin M Ritter, to Reliance Building, Chicago

Tubercle Bacilli in the Nose —Dr Straus has shown in *Archiv de Médicale Experimental*, the occurrence of these bacilli in the nasal cavities of persons, themselves in good health, who have been frequenting localities where phthisical patients were habitually present

Society of the New York Hospital.—The annual report of the Society of the New York Hospital shows the number of patients admitted to the various wards in the New York Hospital during the last year was 4,708 The total number discharged was 4,700 But of this number 1,118 were cured, 3,154 improved, 150 unimproved, and 278 died The number of out-patients treated during the year was 8,700

American Medical Editors —The annual dinner of the American Association of Medical Editors will take place Monday May 6, at the Equitable Building (ninth floor), Calvert and Fayette Streets, Baltimore A business meeting will be held at 6 30 P M, at the same place Members may bring guests upon purchase of tickets for them Banquet tickets, $5 Those expecting to attend will please write immediately, stating number of tickets desired, to William B Canfield, M D, 1010 N Charles Street, Baltimore, Md

Casualties by Foot ball in the Season ending April 20 —The English foot-ball year closed at about the above date The *Westminster Gazette* publishes its annual statement, the "Foot-ball Butcher's Bill," a summary of losses by that popular form of athletics The deaths of the past season were twenty in number, subsequent upon injuries received on the foot-ball field There were also over one hundred and fifty legs, arms and collar bones broken, besides many cases of concussion of the brain or spine paralysis, knee caps split, peritonitis and hundreds of minor casualties

A Centenarian's Festivity —On April 20, at Glassborough, N J, Mrs Hannah Chard celebrated her one hundred and sixth birthday Four generations of her descendants attended and many others, for everybody within a radius of ten miles had been invited Of twelve children, three sons survive, the eldest is 78 and the youngest 61 years old She has thirty two grandchildren eighty one great-grandchildren, and twelve great-great-grandchildren She is active, rising commonly at 5 30, has a good memory for events, and keenly enjoys an occasional smoke, using a clay pipe, by preference

Treatment of Anthrax —According to Lecourt the treatment of anthrax should consist of 1, sterilization of the skin around and over the focus with a tampon soaked in a 5 per cent carbolic solution, 2, repeated punctures with the thermo-cautery two or three centimeters apart on the surface of the anthrax (fiery wells of Verneuil), 3, irrigation of each of these openings with the carbolic acid solution until the liquid returns clear, 4, injections of a 5 per cent solution of iodoform in ether in these openings, 5, wet dressing with many folds of gauze moistened with a 2 or 5 per cent carbolic acid solution according to the tolerance of the skin The main point in the treatment is to obtain deposits of the iodoform crystals on the walls of these openings The dressing should be large and extend beyond the inflammatory zone Lecourt reports twelve cases treated by this method, all successfully[1]

The Medical Missionary Society of China.—Dr C R Hager writing from Canton, gives a summary of the fifty-sixth annual meeting of the above society The managing committee show that the work of the Canton Hospital reached 19,-000 out-patients, or attendances, and that an equal number was reached in other hospitals of that province, the total being 38,967 The admissions to hospital were 1,410, surgical operations 2,154, dental 2,053, while 1,311 visits to the houses of the sick were made The expenditures were $2,000 while the receipts were nearly $3,800 The field covered by this society never ceases to expand, and it now conducts medical or dispensary relief in seven or eight centers Dr Kerr now in charge of the Canton Hospital, as well as the president of the above named society has been on the ground fully forty years

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[1] Beginning of epidemic

[1] These de Paris

The "Ideal Physician" Again—A recent writer offers the following "The ideal medical man is better described under the title of 'the philosophical doctor' than as the medical philosopher, for he is *primarily* a physician, but must make use of philosophical ways and means if he is a rational—and from the standpoint of his fellow physicians—a successful physician" We all know that to be well esteemed by the better class of his colleagues the wide-awake doctor must belong to the physiologic school So that if the saying above quoted be true, too, we begin to see that none of us may set ourselves up as "ideal" unless we can answer to the call for a physiologico-philosophical line of practice This is a long definition, but there are those who can and do conform to it in their daily walk and conversation

New Method of General Anesthesia—Rosenberg observes 1, that the cardiac syncope sometimes occurring in the course of chloroform anesthesia is—always excepting those cases in which the anesthetic is given in exceptional doses or without care—an accident of reflex origin, 2, in common with the arrest of the respiratory movement it is caused by an excitation of the peripheral terminations of the trigeminus in the nasal mucous membrane, 3, inhalations of any anesthetic whatsoever, cause the same reflex phenomena of irritation as chloroform, 4, by a rational application of cocain to the nasal mucous membrane we may suppress all the phenomena of reflex irritation starting from this point, 5, we may thus eliminate a great deal of the danger from anesthesia by inhalation of vapors, notably chloroform, 6, under these conditions chloroform becomes the least dangerous of the anesthetics and is preferable to ether for surgical purposes As regards the technique with chloroform 1, it should be given by drops at first, 2, the administration of chloroform should always be preceded by the application of cocain to the nasal mucous membrane, 3, its administration should always be intrusted to a physician [1]

Osteomyelitis following Typhoid Fever—Dupont uses the term osteomyelitis in preference to periostitis, osteitis, etc, in describing the osseous lesions consecutive to typhoid fever, since the disease process always begins in the medullary tissue, and the bone and periosteum are only attacked secondarily, when the medulla is the seat of infection it is evidenced by the changes in the bone and periosteum These lesions are most often observed in the child and youth, either in the course of the fever or during convalescence Fatigue and traumatism are among the other predisposing causes The pathogeny is to be found in the infection of the medulla, either by Eberth's bacillus or some other micro-organism Another interesting fact pointed out by Dupont is the frequency of the chronic apyretic evolution of these osseous invasions The post-typhoid osteomyelitis usually ends in recovery, but the disease is of long duration Therapeutic measures will depend on the extent and gravity of the lesion In the majority of cases, rest in bed from the beginning, incision of the sub periosteal abscess, with scraping of the bone and trephining, if scraping does not suffice [2]

Corporal Punishment in London Schools—Before the London School Board the question was under discussion if the female scholars in the Board Schools should be whipped the same as the boys, and whether or not girls felt the indignity against their persons more poignantly than the boys Mr Athelstan Ridley advocates that the rod should no more be spared in the case of a girl deserving punishment than a boy, in fact, according to his experience—which had been considerable—girls are more spiteful than boys, and a good caning is often richly deserved and is beneficial in the end The question of the corporal punishment of the female sex in the free schools is to come up at the next Board meeting

Eight Sheffield Anaks—A recent importation of an English family, the head of which is a Sheffield knife-grinder named Shields, passed through the port of New York destined for Mormondom The children of the family are nine in number, eight sons and one daughter Of these sons, the shortest one—a youth still in his teens—is six feet and seven inches tall The united longitude of these sons arranged in a vertical manner, is not far from fifty-four feet, or eighteen yards The New York *World* reports the father as saying

"I am 64 years old, and my wife is a year my junior We had nine children (he said this with a sweep of his rugged hand) and the good Lord has spared all of them to us Our eldest son is 35 years of age, and the youngest is 19 Our daughter, Grace, is 23, and she is the pet of the family How do I account for the extraordinary size of my sons? Well, that is, I suppose, one of the great mysteries of nature It was the Lord's will and His will be done"

The father is rather above the average height, while the mother is rather below the medium

Personal Notes—Teres atque Rotundus—The profession of Dublin has in one of its members a heavy-weight all 'round sport in the person of Dr Austin Meldon, of Merrion Square, whose weight is 378 pounds He is a bicycle rider and lawn-tennis adept He is the author of a treatise on dermatology, and is surgeon to an eye and ear infirmary, he is also known to have written on gynecologic and obstetric subjects, as well as cholera, gout, rheumatism and surgical anatomy He has been a demonstrator of anatomy and has not neglected the interests of life insurance

Dr Irving W Lyon, of Hartford, who has been elected to the Presidency of the Hartford County Medical Society, is an ex-interne of Bellevue Hospital and the Medical Director of the Hartford Life and Annuity Insurance Company

Mr Myron Whitney has a case before the Court of Claims of New York, demanding damages for a deprivation of his liberty in the Insane Asylum at Utica, the amount claimed being in excess of $1,250,000, he asks for $5,000 per diem for 264 days

Hereditary Essential Polyuria—Marinesco reports the cases of two brothers afflicted with essential polyuria since their childhood Their mother had polyuria during her pregnancies The patients passed on the average twenty eight liters of urine per day Uranalysis showed only an increase in the chlorids One of the children died from cerebral meningitis and necropsy disclosed a gelatiniform appearance of the walls of the fourth ventricle, with hypertrophy of the neuroglia, considerable edema and disappearance of the fibrillæ found there normally Outside the nuclei for the vagus were some small hemorrhages [1]

Cardiac Complications of Gonorrhea.—Prevost reports the case of a patient who, after an urethral injection of permanganate of potash during the acute stage, presented symptoms of endocarditis with a mitral insufficient murmur, fever and thrombosis of the right brachial vein Endocarditis, especially localized on the mitral valve, is the most frequent form of cardiac disease due to gonorrhea It may assume a simple acute form, or an infectious and rapidly fatal type The pathogenic influence of the gonococcus is not yet proved The author is of opinion that injections which may bring about the complications should be interdicted during the acute stage [2]

Percussion Sound of the Thorax—Castex by using Doumer's method—photographing manometric flames—concludes that the shock of percussion starts into movement the pulmonary aerial mass, the thoracic walls and the pulmonary tissue The pulmonary air vibrates in obedience to the laws of resonance and gives out its proper sound, which we may term the pulmonary sound The thoracic walls, or better, the ribs also emit a sound—the parietal sound As for the pulmonary parenchyma, like the soft integument, it has no proper sound and only tends to smother the other two sounds The combination of the pulmonary and parietal sounds, mixed with the bruit of the shock and the sound of the pleximeter, constitute the percussion bruit of the thorax According to the manner of percussing, the relation between the intensity of the parietal and pulmonary sounds may vary and one of them may predominate in the percussion bruit[1]

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[1] Rev Int de Ther et Pharm
[2] These de Paris

[1] Le Mercredi Medical
[2] Arch Med Belges

Treatment of Pyloric Strictures —Durante has originated what he calls the "plastic gastroduodenal operation" for use in difficult cases of pyloric stricture—for instance, in diffuse stricture of the pylorus and duodenum with multiple adhesions of neighboring organs After an incision as for pyloroplasty he lacerates the thickened wall of the pylorus and then makes a sort of autoplasty He prolongs the incision on the anterior wall of the stomach above and close to the bone, lowers the triangular flap thus formed to the incision in the duodenum, and sutures the edges to this incision He reports no recurrence after two years[2]

The "Golden Climate" of the Canaries —Dr Douglas, formerly of Sunderland, England, was driven by ill-health to seek a clime less trying than his own, and made his temporary home at Las Palmas, the capital of the Grand Canary The balmy qualities of the atmosphere are indicated by the facts that fire places in the dwelling rooms of the houses are almost unknown, that the invalid may live, practically, in the open air twenty four hours each day, bed room windows being seldom closed, months may pass by without the visitor being confined to the house by rain, excessive heat at times prevails when the winds are easterly, borne from the African mainland, these islands are supposed to be the Fortunate Islands of Pliny, whose "people never die" Dr Douglas states that he went to Las Palmas, branded with the ominous words, "no hope," but he recuperated rapidly and was enabled to return a new man as to condition of health He cast the stake of his life on the throw, and he will not hesitate to do the same again He commends the Grand Canary, and after a careful investigation, regards Las Palmas as having the finest climate of which we have any knowledge

An "Amateur Casual" Visits Charity Hospital on Blackwell's Island, New York.—A reporter of the New York *World* was instructed to gain admittance to that hospital and make a full report of his findings, *a la* James Greenwood of the *Pall Mall Gazette*, who several years ago over the signature of "Amateur Casual" showed up the work house management of London The *World* reporter, in this instance, developed a sudden attack of rheumatism, with a bad cough The examining physician was imposed upon and passed the would-be patient up to the hospital as being sick by neuritis He was given a bath, and a clean, coarse, unbleached shirt, but no underwear His own underwear however, was returned to him later He was vaccinated He was taken to a ward where tuberculous and rheumatic patients were the occupants, the former predominating The food and medicine were not approved by the reporter the milk being thin, the "tea" poor, the bread stale and sour, the beef very tough and the "extras" few and distributed by assistant orderlies who are, in fact, almshouse convalescents The reporter found that one of the night watchmen was an insanity-suspect, and a nurses'-helper was an epileptic, who had a fit at 4 o'clock one morning when 'on duty" The help was efficient so far as was necessary to keep the ward in a condition of exemplary cleanliness, but beyond that not much could be said The beds were satisfactory except that the pillows were carelessly made of hard coarse straw No table cloths or napkins were allowed The worst features of the management of the interests of the sick were overcrowding and imperfect classification of diseases, along with the employment of unpaid almshouse help The character of the nurses themselves is not made the subject of complaint

Ablation of Luschka's Tonsil.—Escat gives the following indications for and against the removal of the pharyngeal tonsils in children Indications—1, adenoid vegetations, shown by rhinoscopy or by digital examination, obstructing the posterior nares, with continued oral respiration, dryness of the throat, snoring at night, etc , 2, adenoid vegetations of moderate size with relative facility of nasal breathing, but with one or more of the following complications—deafness from tubercular catarrh, chronic oral respiration, rebellious symptoms of chronic bronchitis, attacks of laryngismus stridulus, spasm of the glottis, arrested thoracic development, difficult respiration in infants, rendering nursing difficult Contra indications—1, slight hypertrophy not obstructing over one quarter the height of the posterior nares, with few or no functional symptoms, 2, false hypertrophy due to an acute adenoiditis resembling a chronic state in which there is at the same time acute coryza, redness of the pharynx fever, etc (in case of doubt examine the parts at several days' interval), 3, intercurrence of a grave chronic affection of the lower air passages such as phthisis, 4 during the prevalence of epidemics—grippe, measles, scarlatina, erysipelas, diphtheria, etc General anesthesia is indispensable in operating on the child The best instrument is Gottstein's adenotome modified by Calmette The nasal fossæ should be prepared by daily application of antiseptic ointments, and gargles and antiseptic irrigations used for the throat[1]

Antipyrin Salol in the Treatment of Uterine Hemorrhage.—Professor Labadie Lagrave has used antipyrin successfully in the treatment of certain uterine hemorrhages It is difficult to introduce powdered antipyrin into the uterine cavity, so it occurred to him to use antipyrin liquefied with salol, thus producing a medicament at once hemostatic and antiseptic The following is the mode of procedure equal parts of antipyrin and salol are placed in a test tube so as to occupy about one-third the space, they are then heated over an alcohol lamp, when the mixture is soon transformed into a clear liquid with a slightly brownish tinge This is not the time to use the solution, for it will solidify too rapidly The heating is continued until a well defined brown color is noticed, when there is no longer any danger of its rapid solidification The liquid is introduced by means of cotton soaked in it and rolled on a wooden applicator, after seeing that the liquid is not too hot, the application is made through the speculum If the hemorrhage is excessive, two applications are made at the same sitting, after which a tampon soaked in glycerated creasote is placed in the vagina and the patient sent to bed The applications are free from danger and occasion no pain Their hemostatic action is rapid, sure and complete, the hemorrhage is quickly stopped and by the second day there is usually no trace of hemorrhage, it is rare that the application needs to be repeated The method is efficacious against hemorrhages due to fungous metritis, to misplacements, fibromyomata and also to malignant tumors in the beginning, when the hemorrhage is due more to congestion than to ulceration[2]

Practice of Medicine in China.—The labors of the Chinese doctor begin at daybreak when he begins to receive his consultants At 10 o'clock he is carried to his patients in a chair The patient hangs a card with his doctor's name in front of the door—a necessary precaution and guide to the doctor, for the houses are all alike and without any numbers

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[1] Arch de Physiol
[2] Rev Int de Med et Chir Prat

[1] Arch Med de Toulouse
[2] Bulletin de Therapeutique

The doctor is received with profound reverence He is offered tea and a pipe and is then asked to feel the patient's pulse If it is a man, the doctor sits face to face, if a woman a screen of bamboo is interposed which is removed in order to examine the tongue The patient places his hand on a book and the doctor applies three fingers to the pulse, feels with each one, then uses all to compress the artery strongly for a period, counting but without noticing the number of pulsations The patient now extends his other arm and the operation begins again The doctor then asks some questions about the sickness and when he finishes is handed a pen He writes a prescription, most of the ingredients being taken from the vegetable kingdom If the patient is a mandarin or other wealthy person, the doctor indicates by writing the nature of the disease, the prognosis and treatment, and receives as an honorarium 7 to 8 francs Often, however, the family and friends are content with a simple verbal communication The money is wrapped in red paper and if very grateful in gilt paper Except with persons of rank and wealth, the fees vary usually from 16 cents to 2½ francs according to the patient's condition The family is supposed to pay the chair-bearers besides The doctor does not make a second visit unless he is asked If recovery is slow they call in a second doctor, then a third, a fourth and so on, until finally they have recourse to the god who possesses the greatest reputation for curing [1]

General Character and Skill are not to be Considered —In an action for malpractice of a surgeon, the complaint alleged negligence and unskillfulness on the part of the defendant in the treatment of the case There was no allegation nor was evidence offered by the plaintiff to show, by general reputation or otherwise, that the defendant lacked the ordinary and competent skill which belongs to his profession The allegations and proofs on the part of the plaintiff, so far as skill of the defendant was concerned, were confined to the question of the degree of skill employed in the actual treatment of the plaintiff's case But, when the defendant had the case, he was permitted to introduce the evidence of witnesses to the effect that he was generally reputed and considered to possess a high degree of skill in his profession The evidence was received under the objection and exception of the plaintiff, and, a verdict having been rendered for the defendant, that exception was the ground on which a motion for a new trial was granted That the admission of the evidence was error and that the motion for a new trial was properly granted on that ground, the General Term of the Supreme Court of New York affirms (Degnan v Ransom, Dec 27, 1894) It says that it is a little difficult to see, on principle, how the general character of the surgeon can ever be material to the inquiry whether he has been guilty of malpractice in a particular case, because it is certain that, though he be the merest pretender to surgical skill—the veriest quack—yet if, by chance, he treats the particular case correctly, he is not guilty of malpractice, and, equally, though he be a master in his profession, yet if, through neglect to apply his skill in the particular case, he treats it improperly, the patient may have his action

Examination of Army Medical Officers for Promotion —Boards for the examination of assistant surgeons for promotion have recently been convened at Washington, D C, and Fort Leavenworth, Kansas These boards are required to examine into the physical condition as well as the character and professional efficiency of the candidates for promotion When an officer is found to be physically incapacitated for active service the board concludes its examination and reports the cause which, in its judgment, produced the disability and whether the disability was contracted in the line of duty Should the officer prove to be sound in body and mind, the board proceeds with the second part of the examination, and any evidence submitted as to character is carefully considered and such proceedings taken as the case seems to require, provided that an adverse finding shall not be entered until the officer has been heard fully on his own behalf The professional examination is conducted in writing, and the questions and answers are transmitted to the Surgeon-General with the proceedings of the board, the favorable report of which is couched in the following terms "We find that —— has the physical, moral and professional qualifications to perform efficiently all the duties of the grade to which he will next be eligible, and recommend *him* for promotion thereto" When the board fails to recommend in these terms the record must explain the cause of the failure For the guidance of the officers concerned, Surgeon-General Sternberg, under date of April 3, 1895, has issued instructions concerning the scope of the professional examinations The lieutenant under examination for his captaincy has to show a competent knowledge of 1, first aid and transportation of wounded, 2, hospital and hospital corps administration, 3, Army Regulations so far as they relate to the Medical Department or to the medical officer as an officer of the Army, 4, general and military hygiene, 5, recent progress in medicine and surgery, 6, subjects in which the officer may have been conditioned at his examination for appointment The captain before obtaining his majority is examined in 1, Army Regulations so far as they relate to the Medical Department or to the medical officer as an officer of the Army, 2, general and military hygiene, 3, clinical medicine, including recent progress in etiology, pathology and therapeutics, and 4, surgery and gynecology, including new operative procedures and the technique of aseptic surgery

An Intrepid Medical Explorer —Dr Emil Holub, who is now visiting in the United States, has not inaptly been named the "modern Livingstone" There are points of manifest similarity between the two men, such as the medical training, their powers of endurance and courage, and the territory—the southern and central parts of Africa—that has attracted them and caused them to spend years of most laborious effort at exploration The two men had their wives with them during a part, at least, of their journeyings *Illustrated Africa*, a journal that has published some of the results of Dr Holub's travels, presents some interesting facts concerning this adventurous medical explorer and his brave wife who consented to go with him to Africa and undertake a second and semi official voyage of discovery. That journal says

"Dr Holub first arrived in South Africa on July 1, 1872, with a medical diploma and experience, and £2 sterling in his pocket, determined to provide himself with whatever was needful for his scientific researches to the northward Making his way to the diamond fields, he engaged in the practice of his profession before undertaking his first journey, which extended into Bechuana and the Transvaal Returning to the diamond fields to accumulate larger resources as the reward of his medical skill, he made his second journey, pushing further northward and returning to the coast finally after many hardships and serious losses, with a large quantity of valuable specimens, with which he returned to Europe in 1879 These attracted wide interest, and by a course of lectures in Germany and Austria, Dr Holub secured most of the resources required for a second and more extensive series of explorations

"This journey was taken under the patronage of the Emperor of Austria-Hungary, and he chose for his assistants six Austrian soldiers, who were also artisans and tradesmen Having observed the fact that European women were less liable to contract African fevers than men, he consented to being accompanied by his young bride, whose bravery and devotion, skill and womanly resources saved him and his expedition

'The second journey of exploration, which covered a period of four years, was begun in 1883, arriving in Colesburg from Cape Town in April, 1884 From this point transportation was made by teams of from sixteen to twenty oxen, preserving their lives while passing through localities where they were liable to contagious diseases frequently calling forth his medical skill On one occasion all the cattle were attacked by a lung complaint which, unchecked, would have destroyed them Calling into use a method of treatment known to the Dutch for fifty years, he vaccinated sick oxen with the decayed lungs of some that had died, and thus saved all the rest When he had advanced as far on his journey as the Limpopo River the oxen, upon whom the movement of the expedition was then dependent, were attacked by a disease of the spleen In view of the success of the lung vaccine he determined to try an experiment, and made a valuable veterinary discovery by curing the dying cattle with the aid of spleen vaccine"

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[1] Journal d' Hygiene

"Purity not Penitence"—Faulty Preparation of Water-Supply Basins—The *Boston Medical and Surgical Journal* has an article on the proposed new supply of water that is to give to the Boston of the future that most precious of the gifts of earth, a clean clear water The Greater Boston, to be taken into the account at the present juncture, will soon have a population of 2,000,000 people, and those having charge of the proposed new plant are adjured to remember that what mankind demands of a drinking water "is not repentance but purity" To obey this dictum is better than sacrifice, and not to obey it, in fact, is a sacrifice of human life

The country side from which the supply will be derived is that of the sparsely settled slopes of Wachusett Mountain, about forty miles due west from Boston The land is poor and uninviting to farmers and the region has thus far offered no temptations to a manufacturing population It is relatively free from swamps, the presence of which in the Sudbury section that is now utilized for Boston, gives so undesirably high a coloration to the present supply This Wachusett scheme is capable of extension to still other sources of pure supply so soon as an added quantity shall be demanded The amount of money that the new system will cost will be $10,000,000, of which $4,000 000 will immediately be applied to preparing the great storage reservoirs that are to form a part of the system It has been found, in regard to the present Sudbury system that a great improvement has been effected by the more thorough removal of the soil from two of its great basins, which at first had not been thus treated This lesson has led the Boston authorities to follow the same line of treatment in the basins that have lately been introduced into the Sudbury system

The Boston and Lawrence lessons teach that too great care can not be exercised in the construction of water reservoirs, and the inference is inevitable that the water engineers of the past have either not appreciated or have not insisted upon the need of a more thorough preparation of those basins than has been practiced This line of work is not the cheap way but it is one that is competent to the production of an attractive, colorless drinking water

The water of Lake Winnipiseogee, in New Hampshire, has for a generation been looked forward to as the ideal water of the future, but that had, perforce, to be given up by the Boston Commission In the first place, the lake being in another State, it was highly improbable that Massachusetts could have that absolute control that would be desirable to protect the waters, then, the lake is not above suspicion, having already shown a measurable degree of pollution, which is in the future destined to be increased

Another proposition that has had to be discarded was the use of the filtered waters of the Merrimac River The use of these waters by the city of Lawrence has been so satisfactory—and the ready avoidance of certain legal questions making a strong argument on their behalf, on the score of expediency—some have thought favorably of drawing from this source, but these, being filtered waters, are not absolutely above suspicion The Commission determined to find, if possible, a pure water rather than a purified one Another drawback in connection with a large filtration plant, employing a hundred or hundreds of workmen is the possibility of a ' strike" and a locking up of the drinking water of a great metropolis, there was in this an element of risk that needed to be taken into account In connection with other considerations this risk had a deterrent force as against the Merrimac supply

Society Notes

THE one hundred and second annual meeting of the Windham County Medical Society was held in Hartford, Conn, April 28——The Fox River Medical Society held a regular meeting at Kaukauna, Wis, April 28——The Montgomery County Medical Society met in Crawfordsville, Ind, April 16 The following officers were elected for the ensuing year President, R Kelso, Vice President, W H Ristine, Secretary, P J Barcus

Hospital Notes

BROOKLYN HOSPITAL—This, the oldest institution of its kind, is soon to pass its fiftieth birthday In untimely preparation for this event, a discrepancy has been announced to have sprung up between the medical staff and the board of trustees Two physicians and two surgeons on the visiting staff have sent in their resignations, one or more of these resigning members will, however, be transferred to the consulting staff The true grounds of dissatisfaction appear to be unknown to the writers of the newspaper statements As might be expected, the medical staff is slow to give out anything for publication The trustees also are reticent, except that they hope to persuade the resigning members, or some of them, to reconsider their resignations A sufficient number of the attending staff remain with the hospital to care for the patients

Philadelphia Notes

THE PHILADELPHIA COUNTY MEDICAL SOCIETY, on account of the session of the AMERICAN MEDICAL ASSOCIATION next week, resolved to postpone the stated meeting of the 8th inst, to May 15, and to omit the meeting of the 22d, which would conflict with the State Medical Society session at Chambersburg, beginning May 21

THE ANNUAL DINNER OF THE ALUMNI ASSOCIATION of the Jefferson Medical College will be held May 14 at the Hotel Bellevue, Philadelphia The committee earnestly desires that every alumnus will make a special effort to be present The acceptance and money, $8, should be sent prior to May 5 to the Chairman of the Committee, Dr Howard F Hansell, 254 S 16th Street, Philadelphia in order to have the invitations sent and the names printed on the menu cards as subscribers to the dinner

DR GEORGE M GOULD tendered a complimentary reception May 2 to DR James E Reeves, of Chattanooga

Louisville Notes

CITY HOSPITAL—May 1 of each year is the usual time for the visiting staff of the hospital to be appointed by the Board of Public Safety, and there was great surprise caused by the announcement that during the coming year the Southwestern Homeopathic Medical College would be entitled to equal representation upon the staff of visiting surgeons and physicians It is the claim of the homeopaths that they are a legally chartered college, and that they are entitled to full recognition at the hospital, receiving one-fifth of all the patients admitted for treatment There exists in Louisville a "Colored Medical College" which is legally chartered and its graduates are recognized by the State Board of Health The four regular schools whose faculties have served the city so well without compensation for so long are justly indignant because of this recent ruling, and claim that the colored school has the same right to a representation upon the hospital staff as the homeopaths, in fact, a greater right, for a far larger proportion of the inmates of the hospital are colored than are believers in the Hahnemann doctrine But the Honorable Board of Safety state that they intend to draw the color line, and the negro college has no right to demand recognition at their hands, but that the homeopathic college with perhaps fifteen or twenty students, has the right to equal representation upon the staff with the four regular colleges, which send each year four hundred or more students to the clinics there, meaning a revenue of $2,000 to the city The subject is being widely discussed but no step has been decided upon

SMALLPOX—Henderson has a case of smallpox, but as this is the home of Dr Arch Dixon, a member of the State Board of Health, there is no fear of a serious outbreak, as every precaution has been taken

STRUTTON—Dr Levi B Strutton died April 24 at his home near Lawrenceburg, from the result of a fall, which produced concussion of the brain He was 81 years of age

Maxwell —Dr J C Maxwell, one of the oldest and most prominent men of Lebanon, died at his residence on the 26th inst, from cancer of the stomach

Death Report —There were 83 deaths from all causes during the past week Of these 21 were due to pneumonia, 16 to consumption, 3 each to typhoid fever, organic heart disease and cerebral meningitis Forty-six were male, 37 female, 53 white, 30 colored Five deaths occurred at the City Hospital There were 5 stillbirths

PATHOLOGIC AND ANATOMIC ASSOCIATIONS

An Act to provide for the incorporation of pathologic and anatomic associations for the advancement of medical and surgical science State of New Jersey (Passed the Legislature and signed by the Governor)

1 Be it enacted *by the Senate and General Assembly of the State of New Jersey*, That any three or more physicians duly authorized and licensed to practice medicine under the laws of the State of New Jersey, who shall desire to associate themselves together for the purpose of pathologic and anatomic study and the advancement of medical and surgical science may make, record and file a certificate in writing in manner hereinafter mentioned

2 *And be it enacted*, That such certificate in writing shall set forth

I The name or title assumed to designate such association

II The place or places in this State where the purposes of such association are to be carried out

III The purposes for which the association shall be formed

IV The names of the governors or directors who shall manage its affairs for the first year of its existence

3 *And be it enacted*, That such certificate shall be proved or acknowledged and recorded as is required of deeds of real estate, in a book to be kept for the recording of certificates of incorporation in the office of the clerk of the county where the purposes of such association are to be carried out, and after being so recorded shall be filed in the office of the Secretary of State the said certificate, or a copy thereof, duly certified by said clerk or secretary, shall be evidence in all courts or places

4 *And be it enacted* That upon making such certificate and causing the same to be recorded and filed as aforesaid, the said physicians so associating, their successors and assigns, shall, by virtue of this act be a body politic and corporate in fact and in law, by the name stated in such certificate, and by that name they and their successors shall have perpetual succession and power to sue and be sued plead and be impleaded answer and be answered unto, in all courts and places whatsoever, to make and use a common seal, and the same to use at pleasure and take, have hold, receive and enjoy any lands, tenements or hereditaments in fee simple or, otherwise, and any goods, chattels, or property of any description real or personal, and whether acquired by gift, grant devise, bequest, or otherwise, and the same to grant, convey, lease assign sell or otherwise dispose of for the purposes of said association

5 *And be it enacted*, That the directors or governors of such association shall have power from time to time to make alter and amend by laws not inconsistent with the constitution of the United States or of this State fixing or altering the number of its governors or directors for the management of its property and the regulation and government of its affairs, and providing for the mode of filling vacancies in and removing any member from their number and prescribing qualifications for membership of the association, and to appoint such agents and officers as shall in their judgment tend to promote or advance any purpose of the association and to prescribe their respective duties

6 *And be it enacted*, That no governor or director of any association organized under this act shall receive directly or indirectly, any salary or emoluments from such association, nor shall any compensation whatever be voted, allowed or paid by the governors or directors thereof, to any governor or director for services, either as governor or director or in any other capacity

7 *And be it enacted* That the property of any association organized under this act and held for its purposes to an amount not exceeding five thousand dollars shall not be liable to the imposition of any taxes

8 *And be it enacted*, That whenever an association shall be formed or organized under this Act in any county of this State, all public officers, agents and servants and all officers, agents and servants of any such county or of any city township, borough district and other municipality and of any and every almshouse, prison morgue, hospital or other public institution in such county, having charge or control over dead human bodies required to be buried at the public expense are hereby required to notify the president or other head officer of any such association or such person or persons as may, from time to time be designated by said association as its duly authorized officer or agent, whenever any such body or bodies come to his or their possession or control, and shall, if such association or its duly authorized officer or agent request it, without fee or reward deliver such body or bodies and permit such association and its duly authorized officers or agents, who may comply with the provisions of this act, to take and remove all such bodies to be used within this State for the advancement of medical and surgical science but no such notice need be given, nor any such body be delivered, if any person claiming to be, and satisfying the authorities in charge of said body that he or she is, of kindred or is related by marriage to the deceased, shall claim the said body for burial, but it shall be surrendered for interment, nor shall the notice be given or body delivered, if such deceased person was a traveler who died suddenly in which case the said body shall be buried

9 *And be it enacted*, That the said association may employ a carrier or carriers for the conveyance of said bodies, which shall be well inclosed within a suitable encasement and carefully deposited free from public observation, the drivers or persons in charge of such carrier or carriers shall obtain receipts by name or, if the person be unknown, by a description of each body delivered by him, and shall deposit said receipts with the person or persons in charge of the institution from which the said body was taken

10 *And be it enacted*, That no association organized under this act shall be allowed or permitted to receive any such body or bodies until a bond shall have been given to the State of New Jersey by the said association, with two or more sureties, to be approved by the clerk of the court of common pleas of the county in which such association shall be organized, and shall be filed with the said clerk of said court, which bond shall be in the penal sum of one thousand dollars, conditioned that all such bodies which the said association shall receive shall be used only for the promotion of medical and surgical science within this State, and whosoever shall sell or buy such body or bodies, or in any way traffic in the same, or shall transmit or convey, or cause or procure to be transmitted or conveyed, said body or bodies to any place outside this State, shall be deemed guilty of a misdemeanor and shall on conviction thereof, be punished by a fine not exceeding two hundred dollars or be imprisoned at hard labor for a term not exceeding one year, or both, at the discretion of the court

11 *And be it enacted*, That neither the state nor any county nor municipality, nor any officer, agent or servant thereof, shall be at any expense by reason of the delivery or distribution of any such body or bodies, but all the expense thereof shall be paid by the association receiving said body or bodies

12 *And be it enacted* That whenever more than one association shall be organized under this act within the same county it shall become the duty of the board of governors or directors of each association so as aforesaid organized within the same county to appoint two of their own number who together shall constitute a board of distribution of dead human bodies subject to delivery to such associations under the provisions of this act which board of distribution shall be notified, as provided in the eighth section of this act, whenever any body or bodies may be subject to delivery under the provisions of this act, and it shall be the duty of said board of distribution to distribute the bodies which may from time to time be so delivered to it under the provisions of this act equally and in just rotation among the different associations organized under this act

13 *And be it enacted*, That it shall be lawful for any association organized under this act to apply for and to receive from any county in this State, dead human bodies, which may be required to be buried at the public expense and which shall not be claimed by any kindred or relation, as provided in the eighth section of this act, and it shall be lawful for any public officer or agent or any person in charge of a public institution as enumerated and set forth in the eighth section of this act to deliver such human body or bodies under the restriction of said eighth section of this act, to any association organized under this act in any county in this State *provided, however* that when any such association shall have been organized in any county, no body or bodies shall be removed to another county without the association or associations within said county having had an opportunity to receive said body or bodies

14 *And be it enacted* That any person having duties enjoined upon him by the provisions of this act who shall neglect, refuse or omit to perform the same as hereinbefore required, shall, on conviction thereof, be liable to fine of not less than ten dollars nor more than one hundred dollars for each offence

15 *And be it enacted* That all acts and parts of acts inconsistent with this act be and the same are hereby repealed

16 *And be it enacted*, That this act shall take effect immediately

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from April 20, 1895 to April 26 1895

Col Joseph R Smith, Asst Surgeon General, retirement from active service, April 18, 1895, is announced By direction of the President

Capt William P Kendall, Asst Surgeon, is granted leave of absence for six months, with permission to go beyond sea, to take effect upon his relief from duty at Ft Columbus, New York Harbor

PROMOTIONS

Lieut Col Dallas Bache, Deputy Surgeon General to be Asst Surgeon General with the rank of Colonel, April 18 1895

Major David L Huntington, Surgeon, to be Deputy Surgeon General with the rank of Lieut Col, April 18, 1895

Capt William C Shannon, Asst Surgeon, to be Surgeon with the rank of Major, April 18, 1895

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending April 27, 1895

Asst Surgeon M W Barnum, ordered to examination for promotion, May 15 1895

Asst Surgeon J E Page ordered to examination for promotion, May 15, 1895

Asst Surgeon F G Brathwaite, ordered to the Naval Hospital Norfolk, Va

Medical Inspector T C Walton, ordered as delegate to American Medical Association, Baltimore, Md

Surgeon S H Dickson ordered as delegate to American Medical Association, Baltimore Md

LETTERS RECEIVED

Allen, A B, Brimfield, Ill, Ashmead, A S, New York Alden, C H, U S A Bulkley L Duncan New York N Y Canfield Wm B, Baltimore, Colvin, D, Clyde, New York Cerna, David, Galveston Texas Denison, C, Denver, Colo Fox Chas J, Willimantic Conn Farrington, John M Binghamton N Y, Forbes, S F Toledo, Ohio Fyke, E E Centralia, Ill Garcelon, A, Lewiston, Me Gallup, Benj E, Chicago, Ill Ingraham C W, Binghamton, N Y Jenkins, Wm, Cincinnati, Ohio, Jelks, J T, Hot Springs Ark Johnson, G W Savannah, Ill, Jordan, Edwin Chicago, Ill, Jones, W S Camden, N J, Jordan, J R, Montgomery, Ala Krotoszyner, M, San Francisco, Cal Lanphear, Emory, St Louis, Mo Loeb, H W, St Louis, Mo Mattison, Fitch E, Chicago, Ill McDill, J A, (3) Milwaukee Wis Mann, E C, New York, N Y, Madden, J R, Milwaukee, Wis Maclean Donald, Detroit, Mich Meisenbach, A H, St Louis, Mo Mann, F C, New York, N Y Osler, William, Baltimore, Md Paquin Paul, St Louis, Mo Pendley, J W, Sharpe, Ky, Porter Jos D Key West, Fla Parsons, E C, Hartford, S D Pohe G H, Baltimore, Md Reynolds D S (2) Louisville Ky Rio Chemical Co St Louis, Mo Ranniger, G, Naperville, Ill, Seibert W H, Steelton, Pa, Smith, Wm F, Baltimore, Md, Small E H Pittsburg, Pa, Stedman, James, Danforth, Ill Sellman W A B Baltimore, Md Thorp, C Y, New York, N Y, Thomas, C P, Everett, Wash Wingate, U O B, Milwaukee, Wis Wurdemann H V, Milwaukee, Wis Wood, C A Chicago, Ill Woodbridge, John E, Youngstown, Ohio

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ADDRESSES

A FEW LIVING ISSUES AFFECTING THE HISTORY OF MEDICINE, AND WHAT CAME OF THEM

The President's Address delivered at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7 8 9 and 10 1895

BY DONALD MACLEAN, M D, LL D
DETROIT MICH

The patriot poet of Scotland, Robert Burns, recalling the aspirations of his ardent young manhood, immortalized one of them in these simple but eloquent lines

> "A wish (I mind its power),
> A wish that to my latest hour
> Shall strongly heave my breast,
> That I for poor auld Scotland's sake
> Some usefu' plan or book could make,
> Or sing a song at least"

By simply substituting the larger term, Humanity, for the poetical and romantic one, Scotland, in this stanza, we have a sentiment appropriately expressive of the motive which brings us together to day

The annual meeting of the American Medical Association occurs at the brightest and sweetest season of the year and in most congenial surroundings It never, as far as my recollection of its meetings extends, has failed to prove an occasion of delightful interchange of fraternal relations between its members, as well as a season of practical advantage to all sorts and conditions of men, influencing as it does, for the highest ends, innumerable interests and shedding rich blessings upon humanity, wherever sickness is to be healed, vice to be cured, life to be saved, or good to be accomplished If the present occasion proves any exception to its predecessors, you will readily believe that my most earnest ambition is that this may consist in the fact that its endeavors shall be greater and its results more valuable than those of any previous meeting So far as the surroundings and associations of our present place of meeting are concerned, we are indeed highly favored

The members of an Association, interested in matters medical, philosophical, humanitarian, that could fail of being uplifted and inspired by the atmosphere and genius of this beautiful classical city of Baltimore, with its more than imperial halls of learning, its ideal and palatial hospitals, and beautiful charities, its world-famed scholars, philosophers and leaders of thought, must have reached a stage of indifference and lethargy painfully suggestive of that hopeless form of degeneracy known as "paretic dementia"

In the presence of this great and learned Association and in the midst of such impressive scenes of scientific and professional suggestiveness, it is with no little hesitancy and timidity that I invite you to accompany me in a brief and inevitably imperfect retrospect, having reference to what I have designated as "A few living issues affecting the history of medicine, and what came of them"

My purpose is to recall briefly, certain questions which in their day received the active and interested attention of the profession, and of scientific and thoughtful people In doing this, I shall confine myself to the period of my own professional cognizance, namely, the forty years last past or thereabouts

For some years immediately preceding and immediately following the beginning of my professional life, the attention of science and of medical thought was directed toward that renowned center of medical and general learning, my own alma mater, Edinburgh A glance at the names which at that time constituted its medical faculty will explain this They were Syme, Simpson, John Hughes Bennett, John Goodsir, Robert Christison, Lyon Playfair, Mr, now Sir William Turner, who is the only one still remaining of that brilliant galaxy of teachers and philosophers Playfair still survives, but many years ago he abandoned academic pursuits and devoted his life and great abilities to statesmanship, being now a member of the House of Lords, a distinction rarely attained by a member of the medical profession

Such a faculty could not fail to attract interested attention While it is well known that at Edinburgh a vast amount of extremely valuable work was, in these days, accomplished in all departments of medical science, still there was, in that far famed school, one man and one question toward which, from every quarter of the civilized world, eager anticipations were directed This man was James Young Simpson, and the question was, "The use of chloroform as an anesthetic" Having caught the essential idea of relieving pain by the inhalation of ethereal vapors, from this country, Simpson, with the energy and courage of his great nature, devoted all his eloquence, ingenuity and literary acumen to the development and final establishment of the new doctrine How he succeeded we now know full well

Simpson and his followers advocated the tremendous innovation of administering chloroform, not only in surgery, but to suffering woman in her time of sorest need The proposition aroused a tempest of opposition from all sides, not excepting the pulpit All the unreasoning conservatism, not only of Great Britain but of the civilized world, was concentrated and arrayed against Simpson and his allies in this movement He was maligned by his professional brethren, discredited by the general public and anathematized by certain parties in the church All experience was against him, all theory was adverse to the proposed innovation in practice The Bible even, that messenger of peace and goodwill, was hurled at his devoted head and he was advised to read the sixteenth verse of the third chapter of Genesis and ponder it in his heart

"Unto the woman he said, I will greatly multiply thy sorrow and thy conception, in sorrow thou shalt bring forth children and thy desire shall be to thy husband and he shall rule over thee"

To all his antagonists Simpson presented a brave and undaunted front To all their arguments he opposed counter arguments which eventually settled the dispute advantageously to humanity and creditably to him Asked by a high dignitary of the National Church of England on what authority he presumed to contravene the original curse pronounced against the woman, he aptly replies by calling attention to the closing verses of the second chapter of Genesis, which he claimed to be the true and authentic record of the first instance of the use of anesthetics, by which a precedent was established for all similar emergencies

"And the Lord caused a deep sleep to fall upon Adam and he slept, and he took one of his ribs and closed up the flesh instead thereof"

The propriety and wisdom of using chloroform in labor is happily not now regarded as a *questio vexata*, although my own belief is that it is not yet used as frequently or as generally as it ought to be I heartily agree with those who administer it in the trying stages of *every* case of labor Simpson contended for its judicious use in cases of *puerperal, infantile* and other convulsions So far as my own observation and experience go in this class of cases, it stands to-day the most valuable and reliable means of immediate relief On calm and deliberate reflection is it possible, I ask you, to over-estimate the courage, the determination and the fine scientific faith of him who, in the face of such tremendous odds, fought to a triumphant issue, this great battle for science and humanity If the annals of medical history furnish an equally brilliant example of well earned and priceless victory, I am at a loss to know where it is to be found

Before leaving this subject it seems no more than fair to prefer a claim for a considerable degree of honor for one of Simpson's patients who proved also to be a powerful ally I allude to a certain illustrious lady who, reposing sublime confidence in her medical adviser, and influenced we doubt not, by the consideration that the weight of her example must forcibly affect the great question at issue, did not falter in her brave determination (although every conventional influence opposed, and the great ecclesiastical organization of which she was and is the temporal head, held up a warning finger to restrain and deter her) of becoming a party to so startling and revolutionary a proposition Gently but firmly pushing aside these and other influences, she gave the whole world a lesson, in the exercise of a reasonable and well grounded confidence in "*her doctor*," by submitting herself to the new and as yet almost untried obstetrical expedient, thereby instantaneously determining once for all the happy and victorious solution of this great and burning scientific issue, upon the everlasting and invincible grounds of truth and righteousness What reason and argument and strong contention well-nigh failed to accomplish, the brave action of a confiding and gentle woman made easy and certain For this act of royalty may we not in all sincerity exclaim, "God save the Queen!"

In the year 1859, while I was a second-year student in the Edinburgh Medical School, the controversy connected with the introduction of anesthetics had barely been concluded when the scenes shifted, and immediately the movement of another great act in the drama of scientific progress began For the scenes and acts of this mighty drama are continuous and unceasing In it there is neither interruption nor interlude, on it the curtain is never rung down In this year, Darwin's work, entitled "The Origin of Species," appeared in London, and as we look back and contemplate the effect of this book we are forced to admit that it constituted a turning point in the history of science It appears now as if by its means the spectators were permitted to behold a new and hitherto unimagined and unimaginable view of the long sought for secrets of nature, making many things intelligible which, previous to that time, had been wrapped and hidden in that impenetrable and sepulchral vestment, "mystery" Like the wand of the magician it shed new light and inspired fresh hope along every highway and byway of scentific endeavor Slowly but surely, men have come to see that Darwinism and the allied theory of evolution constitute the greatest and most radical living issue affecting the scientific thought of the last forty years It is but a modest and feeble statement of the nature and extent of its claims, to affirm that the fundamental and far-reaching conceptions of Darwinism have forcibly and permanently affected every department of medical thought By their influence, every department and every fact of the marvelous and beautiful drama of scientific evolution has acquired a new and greater significance

It would be impossible, within the limits of this review, to particularize the luminous influences which have proceeded to every department of science, all of which had their origin in Darwin's great generalization Foremost among these was one of profound biologic significance affecting all our previous conceptions of heredity Heredity must always remain a prime factor in the etiology of disease A correct conception of that in which it consists would appear to be indispensable for the comprehension of pathologic processes Manifestly, if Darwin's law were true and if the acquirement of variations by means of natural selection was the cause of modification in the organism, not only must heredity be the cause of permanence in organic types, but it must also be upon transmission of beneficial variations that racial development is dependent

These conclusions gave rise to a renewed application of the laws of heredity to medical science Embryology became a matter of deepest significance Teratology took rank as a science Reversions in type began to be intelligible, strange growths were no longer viewed with wonder as *luses naturæ*, as sportive attempts of nature to accomplish something strange but were studied carefully with an eye to their comparative classification The Cohnheim theory of tumors arose, attributing to residual fetal cells a malign potency even greater than the doctrine of pangenesis would justify The influence of Darwin on medicine can scarcely be exaggerated Where is a better pathology of hernia to be found than in the "Descent of Man?" Notice how fertilizing an influence it brings to the study of obscure diseases Dr

Hector McKenzie, in his recent studies of Graves' disease, finds the cardinal symptoms of this disease, "tachycardia," "exophthalmos," "enlarged thyroid" and "muscular tremor" to be those of extreme terror Darwin's explanation of the *symptoms of terror* is very suggestive Men, during numberless ages, have endeavored to escape from their enemies or danger by headlong flight and violent struggling Such exertion will have caused the heart to beat rapidly, the nostrils to dilate, the breathing to be hurried and all other symptoms of extreme physical effort, the final result being prostration, pallor and relaxation of muscles "And now, whenever the emotion of fear is strongly felt, though it may not tend to any exertion, the same results tend to reappear through force of inheritance and association" If we imagine this condition of terror to become prolonged by failure of the nervous system to regain its balance, we then have a more or less complete picture of Graves' disease Thus Graves' disease may be the expression, by the unconscious memory of the individual, of some shock in an ancestor Nature has indeed a long memory When she remembers her past so well, are we not *arrogant in calling expressions of it* "unconscious?"

While alluding to the influence of Darwin, especially through the doctrine of heredity, it would be wrong not to call attention to another sweeping generalization which must profoundly influence medical thought. The theory of heredity propounded by Professor Weissman, of Freiburg, may be said to have arisen out of Darwin's work largely through being a negation of some of Darwin's conjectures Weissman's theory seeks to explain what no doctrine of heredity has hitherto accounted for,—how a single microscopic cell can reproduce parental characteristics, and frequently characteristics of grand-parents or remote ancestors Darwin's doctrine of pangenesis was never felt to be entirely satisfactory Weissman's theory of the "continuity of the germ plasm,"—the inference of the practical immortality of the germ plasm, the explanation of variation by means of natural not acquired selection, and the *admission that* a man resembles his parents, not because he acquires by transmission their characteristics, but because *he* as well as *they* arise out of the same germ plasm, these are conclusions which, if ultimately substantiated are bound to influence and modify our conception of disease and its processes most profoundly

Those of us who can recall the birth and growth of this new philosophy, those of us who have been privileged to note the ever increasing influence of its teachings and methods on all our modes of thought, not only in the fields of abstract science, but in physiology, pathology and practice of medicine, not to mention other fields of effort, are fully persuaded that whether or not this may be set down as a live issue which has been finally and definitely estimated and disposed of, no more vital and far-reaching one has ever affected our views of natural processes or our methods of reasoning, whether as philosophers, scientists or practitioners of the healing art than this one so modestly and withal fearlessly set forth in the unpretentious volume entitled, "The Origin of Species," published in London in 1859

Contemporaneously or nearly so, with the important issues referred to, we find another which, involving interests of the utmost importance was, from its nature not so capable of prompt demonstration, thus furnishing cause of argument and disagreement for a number of years I refer to the striking revolution in the theory and practice of medicine which resulted in the abandonment of blood letting and all concomitant so called *antiphlogistic expedients on which* the profession has so confidently and comfortably anchored its faith from time immemorial The change came gradually but certainly It was useless to deny the fact of the therapeutic reformation, and it was a fundamental and beneficent one The discussion and the disagreement was as to the why and wherefore of the change One explanation ingeniously asserted was that the type of disease had changed and that as a result the treatment had to be modified and made milder and more merciful in order to conform to the new and more innocent character of the attack Other explanations have been given, but it would be a waste of time to recall them The fact remains that about the time that I and others equally inexperienced were inhaling our earliest draughts of scientific inspiration under the guidance of the great authorities already mentioned, these eminent men themselves were passing through a radical and complete change of belief and of practice Whatever obscurity may pertain to the various steps and moving causes of this reformation we, from the vantage ground of our present position, are able to look back and with calm judicial fairness recognize the actual truth as to how it was brought about It was no mere chance, no experimental haphazard change of fashion, no mere product of climatic or meteorologic influences, on the contrary, it was the rich and well earned reward of intelligent, earnest and persistent study and observation, carried on in the spirit created and bequeathed to the scientific world by John Hunter and others of his type Among the notable names associated with this issue, not one, in my opinion, stands higher than that of John Hughes Bennett who, studying and intelligently interpreting the fundamental and essential phenomena of irritation and inflammation as seen by the microscope in the web of the frog's foot, the bat's wing, and other translucent tissues, had the genius and courage to turn his knowledge thus acquired to practical uses and discarding the ancient and accepted sheet anchors of antiphlogistic treatment, blood letting, calomel, antimony and so forth, determined to give the *vis medicatrix naturæ* a fair chance Supplementing nature's efforts by mild and supporting methods he succeeded in reducing the mortality of pneumonia from 20 per cent to less than 3 per cent in the worst class of *complicated* cases, while in plain uncomplicated cases the mortality was reduced by Bennett from about 20 per cent *to nil* or thereabouts These statistics are presented on the authority of my friend Prof John A Ouchterlong, of Louisville, Ky, and can not be questioned And what was even more important he persuaded the whole professional world to pause and reflect By imitating his methods of observation and reasoning, the profession, in the true spirit of scientific modesty yielded more implicit honor to nature and to nature's powers and methods of healing In the accomplishment of this impressive transformation scene in the drama of scientific medical progress, the leaders of thought on this side of the Atlantic, to their honor be it said, furnished prompt, intelligent and effective assistance This is one of those living issues, one of those stirring and inspiring acts in the drama of scientific progress, the happy accomplishment of which I and my cotemporaries have been privileged to observe and take some part in In close and rapid succession we encounter other issues to be enumerated in this review

In the humble office of a poor and unknown physician in Alabama, and almost simultaneously in a small and comparatively limited and insignificant ward of the royal infirmary of Edinburgh, initial arrangements were wisely made in all scientific modesty and earnestness for the ultimate presentation of a marvelously important and beautiful scene in the great drama of practical medical science In other words, by J Marion Sims on this side of the Atlantic, and Simpson on the other, with the support and assistance of their immediate allies and associates, the science and art now known as gynecology was conceived and rapidly matured From very insignificant and unpromising beginnings this science has certainly, as we all know, increased and grown and, in short, passed through an almost miraculous process of evolution Although some of its claims may be extravagant and some of its methods objectionable, and its condition as a whole capable of improvement and refinement, we are bound to claim for it a most exalted and honorable position among the living and successful issues which have contributed to render memorable that portion of the great history of medical progress with which we are now concerned For the vast amount of blessing it has afforded to suffering woman let us give sincere and heartfelt thanks For any failures or blemishes with which this modern child of noble origin may be tainted, let us cherish the hope that these will at no distant date disappear by a gradual process of elimination and evolution

In this retrospective view of living issues in medical thought, it would be impossible to overlook the important and inspiring one comprehended under the name of "the cellular pathology" With this page in the history of our science, the great name of Virchow will always be inseparably associated, as its founder and greatest advocate Based on this great teacher's amazing and fascinating discoveries and deductions, a kind and degree of sanguine expectation was induced in the minds of many people, eager and perhaps too willing to believe that here at last the keynote of all pathologic speculation had been struck, that the solution of all the mysteries of the origin and nature of tissue degenerations was within their grasp, that in the tersely expressed principle "*Omnis cellula e cellula*" was comprehended the master key by which all the hitherto tightly locked avenues of pathologic truth were to be made an open sesame It may be possible to look back and perceive that this confident expectation, was to a great or less extent, misplaced and doomed to disappointment It cannot be denied that there are even yet, in spite of the cellular pathology and all that has come after it and through it, a good many very deep and dark mysteries still unsolved in the domain of pathology And yet is there an individual here present, is there a member of our profession anywhere who is not willing to pay sincere and loyal homage to the cellular pathology for its own sake, as well as to its immortal founder and his school for all that it made possible in the advancement of pathology, as well as biology generally?

My old friend and classmate, Mr Lawson Tait (to whom, in common with my professional brethren everywhere, I am always ready to acknowledge a vast debt of gratitude for the eminent services which he has rendered to our profession and to humanity) has ventured to speak in terms of sarcasm and contempt of the cellular pathology He tells us that when he entered the profession everybody was "mad after a new cell," and he adds, "a cellular pathology grew up which was to explain everything" The implication is obvious that everybody *did not* succeed in finding a new cell and that the cellular pathology did *not* explain everything, all of which is no doubt only too true It is incomprehensible (to me at least) that Mr Tait can believe or that he can expect other intelligent students and thinkers to believe that the cellular pathology of Virchow and his school does not stand out to-day as one of the most inspiring and beautiful features in the history of medical effort and thought in this age

To say the very least, it constituted in its day a stepping stone of the most vital and critical necessity, without which the onward and upward march of pathologic and biologic progress must inevitably have been grievously delayed and embarrassed Mr Tait or any one else who presumes to sneer at or belittle this product of Virchow's genius writes himself down in my opinion on a plane with the illiterate and unesthetic bucolic immortalized by Wordsworth in the well known lines

"A primrose by the river's brim
A yellow primrose was to him
And it was nothing more"

Pasteur, Tyndall, Lister, the mention of these three names, familiar wherever the rays of modern civilization have penetrated is, I am sure, all that is necessary for the purpose of introducing here the ever fresh and all important "living issue" known as the "germ theory of disease"

It would be little short of impertinence for me to inflict upon you any extended dissertation on this great issue, in regard to which such ample facilities have been furnished for enabling every individual to obtain the fullest knowledge from which to form an intelligent opinion as to the precise value of this theory to practical medicine and surgery This, at all events, will be freely conceded, that from the time of Hippocrates down to the present moment, the history of medicine will be searched in vain for another instance of the application of scientific facts and observations to medical theory and practice secured by patient untiring effort that can for a moment be compared with this one Starting with Pasteur's abstract, and so far as practical medicine and surgery are concerned, we might almost say, aimless experiments and observations, like a photographic negative, gradually but beautifully it has developed and grown, until the whole theory of the healing art has come to be thoroughly modified and colored by its influences

It was undoubtedly the inspiration derived from the Darwinian doctrine of the struggle for existence ultimately securing the survival of the fittest, that gave new significance to the studies which had begun with Pasteur, and whose relation to surgery had been so splendidly demonstrated by Lister in a series of brilliant and conclusive experiments in 1865 If life from its abstract standpoint were a conflict in which the fittest survived, how much more so was the concrete and organic life the scene of a perpetual warfare with those insidious foes, the microbes It is not possible here to trace the growth and development of the new science of bacteriology which we know has revolutionized the science of surgery, modified the art of surgery and subverted *our deepest*, most fundamental pathologic beliefs So essential has this science become that to day we regard no young practitioner as thoroughly equipped for surgical work who is not something of an expert bacteriologist It is out of the study of bacteriology and microbic pathology that modern medicine is slowly but certainly evolving one of her supreme triumphs Hitherto the immunity to attacks of smallpox conferred by vaccination has been an isolated and incomprehensible fact Jenner's discovery has been a witness to the value of empiricism in medicine In harmony with no theory, explained by no logical device, vaccination has by its own inherent virtue proved the value of *undiscovered theories* To day a meaning is given to the word "immunity" such as was never before known A great hope animates the noblest of professions, that *in all the so called zymotic* diseases, immunity may eventually be conferred and the most disastrous agencies of human destruction may be deprived of their malignity through the sublime genius of man

It would be impossible to discuss at length the various theories of immunity, nor can I venture to attribute the degree of truth pertaining to each To designate the particular role of the phagocyte in the competitive struggle graphically described by Metschnikoff—to decide whether the organism generates its own bactericides, or whether the so called antitoxins and alexines are the product of certain suicidal tendencies on the part of the bacteria themselves—these are secrets which the laboratory is effectually disclosing Some one has said, a man confronts his own worst enemy as he looks in his mirror, and it may be that the bacteria themselves are their own worst enemies That while they are causing commotion within our bodies, they are really engaged in the work of self destruction However this may be, the recent experience of the profession in the antitoxin treatment of diphtheria, a treatment the introduction of which the Health Officer of New York already admits has lessened the death rate from that fell disease 40 per cent, indicates that after the lapse of many years vaccination for smallpox is not to stand as an isolated fact in medicine Every fact has some relation to all other facts "For a blade of grass to grow all nature must cooperate," says Diderot If immunity can be given in one disease it certainly can in others If there be one event that can accentuate this meeting in the memory of those who honor it with their presence it will, I firmly believe, be due to the fact that to day we, as a profession, stand on the threshold of one of the most beneficent discoveries medicine has ever made A discovery whose consequences will transcend those of any other in the increase of happiness it will ultimately bring to mankind

In any attempt to review the living medical issues of the last forty years, it would doubtless be expected that reference should be made to the all important one of medical education, a subject in which my own humble endeavors have been intimately involved My first course of lectures in a medical college was given at Queen's University, Kingston, Ontario, in the session of 1864–65, and from that time to the present the question of medical education has been a theme of vital thought and earnest ambition In this country, in Great Britain, on the continent of Europe, everywhere, there seems to have arisen about that time a wonderful *awakening* to a new and better dispensation in the methods and principles of medical teachings

The Edinburgh school led by Syme, Bennett and Gairdner, profiting by lessons derived from the great French teachers of that day, and from Mott and his cotemporaries in this country, inaugurated a reform which soon *spread in every direction* This reform consisted mainly in abandoning the ancient and time honored method of aiming to impart efficient medical and surgical training by that dreary and painful device "the didactic lecture," supplemented by text-books whose orthodoxy and reliability were estimated chiefly by their antiquity and exhaustiveness Gradually *methods have become more practical*, clinical, demonstrative Place side by side a medical college announcement of 1865 and one of 1895 and the contrast will be astonishing and commendable for the profound and radical improvement sustained The mighty impetus given to medical pursuits which resulted from the experiences incidental to our great Civil War culminated in the establishment of medical schools in unnecessary profusion in nearly every State The immediate effect on the requirements for graduation of this feverish activity with its concomitant rivalry constitutes, we must admit, a rather unpleasant subject of reflection Time and force of circumstances have gradually tended to adjust this error, and the standard of medical graduation in the majority of our schools to day is something of which we may all be reasonably proud I should, however, be untrue to my oft-reiterated convictions if I hesitated to mention here one cause of complaint still justly chargeable to a considerable number of our American medical colleges It is summed up briefly but truthfully as follows some of these institutions claim to supply to their alumni complete courses and means of instruction, the fact is that one half of them are shamefully deficient in clinical resources and facilities, while the other half are no less devoid of the men and the means necessary to do anything approaching to justice in teaching fundamental branches, without which a reliable and intelligent knowledge of surgery and practice of medicine is an impossibility It has long been a settled doctrine with many people that the highest duty, as well as the material interest of these unilateral medical colleges, demand that they mutually agree that the efficient *half of* each shall be made more and more efficient and that the feeble and farcical one be suppressed or transferred to that institution which may be best able to do justice to the subjects under dispute Some such mutual combination is essential if in the continued maintenance of these two classes of medical schools they are to be purged of the sin and shame of false pretenses

In the rapid evolution and growth noted in medical education, it has seemed to those most closely concerned that the time has arrived when a united and determined effort might be made to establish a well defined plan which would secure uniform cooperation in remodeling the whole system of medical graduation, thus securing for the various designations of "*doctor*," "surgeon," "physician" and so forth an intelligible and definite signification This, in my opinion is "a consummation devoutly to be wished"

I have thus far aimed to recall briefly a few living issues in medical thought which have had the most far-reaching influence upon the practice of medicine and surgery during my career as an humble student and worker in that great and honorable army, whose duty and glory consist in its efforts to save life and relieve pain If my presentation of these "issues" seem to you incomplete and imperfect, I ask you to consider the vastness of the subject and the impossibility of doing it more than partial justice in the time at our disposal On every hand, issues of the most tempting and impressive attractiveness press forward in one's thoughts and demand at least honorable mention, but the limit must of necessity be drawn with arbitrary decisiveness in accordance with the inevitable and relentless rapidity of movement of the shadow on the sun-dial That the few topics which our limited time has permitted us to pass in review have been essentially fundamental in their relations to all the others will be freely admitted That these are sufficiently important to give honor and distinction to the epoch in which they occurred no one will deny And during this epoch is it not true that in every civilized country under Heaven, vast legions of men have been constantly maintained for very different aims and purposes than those which have engaged our attention? Think for a moment of the incalculable expenditure of energy of every kind which has been devoted to the maintenance and equipment of those vast standing armies whose business it is to

> "March to the drum beat's roll
> The loud-mouthed clarion's bray,
> And bear upon their crimson scroll,
> Our glory is to slay'"

Turning from the contemplation of these "marshalled hosts" and the death and destruction for which they are maintained, is it not a pleasant relief to direct our attention to such a peaceful and beneficent retrospect as that furnished by the labors and achievements of our profession? Is it not more pleasing to recall the quiet sublime efforts of our own contingent in the great "unending column" of life, that army which

> "Moves in silence by the stream,
> With sad yet watchful eyes,
> Calm as the patient planets' gleam
> That walks the clouded skies
>
> "Along its front no sabers shine,
> No blood-red pennons wave,
> Its banner bears the single line
> 'Our duty is to save'"

To sustain and improve this practical and genuine army of salvation, ought to be the living and moving ambition of every individual and every association The United States Government maintains a standing army of at least 20,000 men thoroughly equipped and trained, for the purpose of destroying the lives of persons who are supposed to be inimical to its welfare It leaves to us the responsible and laborious duty of maintaining and equipping, to the best of our ability, a vastly larger and more expensive army of medical soldiers whose functions are infinitely more numerous, intricate and vital than those of any military organization The functions of this army are not only to contend with the enemies of human life and happiness and in so doing to suffer, ofttimes, hardships and privations, but unlike the great army of contention and bloodshed, it is also our duty and pleasure to love, cherish, uplift and save

Ours is an army which so far has had to be self-sustaining and independent, an army which, in respect to all the attributes and qualities of the soldier and philanthropist has no reason to shrink from comparison with any association of men in the world's history To many persons, myself among them, it has for some time appeared that the recorded and recognized results of our achievements give us the right to insist that the peaceful but brave, resolute and progressive army, known as the medical profession, should receive from the people and the government of this country a practical and official recognition which would afford a fair opportunity for the adequate application of the principles of medical science to the needs of the community

A National Bureau of Health, superintended by a competent medical authority who shall be a member of the Cabinet could not fail to secure for the nation, benefits beyond the language of dollars and cents to express A united and dignified effort on the part of this Association and its allies ought to secure this enactment The vast importance of such an act is obvious to the members of this Association, and our imperative duty, as it seems to me, is to impress the active and public-spirited statesmen, who guide and control the affairs of the nation, with the essential truth and value of our views The very respectable problems of foreign policy which have, in recent times, engaged the attention and elicited the energies of our law-makers seem to sink into insignificance in comparison with the great and benign proposition here presented

It is my deliberate opinion that the establishment of a Bureau of Health, as an integral part of the nation's executive, will prove an effective instrument in promoting the public welfare It will be the means of unifying efforts in the suppression of dangerous diseases It will afford opportunity for restraining the effete despotisms of the old world from adulterating our population with the vicious and degenerate It will be a means whereby this enlightened and progressive republic may exemplify, to the world, the true mission of medical science It will offer another agency for disseminating the truths of scientific discovery, another means of discriminating between that which is transitory and accidental in medical achievement and that which is permanent and immutable, and will furnish another promise that medicine in the future shall in no wise be unworthy of her past traditions

The party, professional or political, which shall succeed in consummating this wise measure will assuredly earn for itself the gratitude and applause of an appreciative nation The individual citizen who shall materially contribute to the success of this noble "*useful plan*" *will be justified in* congratulating himself on having realized the lofty aspiration of the patriot, as well as the sublime and pathetic "wish" of the poet "*Homines deos accedunt hominibus dando salutem*"

Buttersack's Vaccine Micro-organism —Drüer (*Centralblatt fur Bakteriologie and Parasitenkunde*) found the forms observed by Buttersack in lymph and claimed by him as the germs of vaccinia, in the contents of pustules after first as well as later inoculations, also in human serum, obtained by aspiration in pleurisy, in normal saliva and in albumin of hen's eggs The last results prove that these forms can not be the specific cause of the inoculation pustule and that Buttersack's hypothesis is untrustworthy —*Centralblatt für innere Medicin*

LECTURES

LECTURES ON INTRACRANIAL SURGERY

VIII—SURGICAL TREATMENT OF EPILEPSY

BY EMORY LANPHEAR, M D, PH D
ST LOUIS MO

In every case of epilepsy where an initial spasm of a segment or a part of the body, or a localizing aura can be detected, trephining is imperatively indicated, for epilepsy is a disease incurable by other than surgical measures, as a rule, while many cases can be benefited by operation when the site of focal disease can be determined and reached This proposition has met, and still meets, with opposition, the reasons urged against it being three in number, viz, 1, in some cases subjected to operation, the convulsions have returned within a few months after removal of the apparent cause, 2, in a number of cases reported the paroxysms continued after operation, undiminished in number and intensity, 3, sometimes epilepsy is cured by a simple exploratory operation, no lesion being discovered—hence the conclusion that whatever good results from surgical treatment arises from the operation *per se* and not from relief of brain irritation A general distrust of operative procedure, too, has sprung up, based upon the unfortunate fact that there has been undue haste in operating upon patients that mature deliberation has shown to be affected with incurable forms of the disease, and also because enthusiastic surgeons, not too familiar with the history of epilepsy, have published premature reports showing "cures," whereas the convulsive seizures returned almost before the articles were printed Temporary cessation of spasms does not mean a cure of epilepsy, since it is a well established rule—too little observed—to pronounce no case *well* until at least three years have elapsed after the appearance of the last attack

But there have been too many well authenticated and truly brilliant *cures* following surgical treatment of severe epilepsy due to depressed bone, tumor and abscess, to allow the unprejudiced physician to question the propriety of operating in any case of focal epilepsy Nor is it necessary to have evidence of disorganization of the cortex, and I may add that under certain circumstances it is not even necessary to have marked localizing symptoms For Pean reports the history of a patient who had suffered for years from inherited epilepsy, not traumatic, internal medication of every description failed, there was no localizing symptom except *pain*, which is not generally regarded as a sign of any significance in deciding the location of an intracranial disease, but in this case it was trusted and exploratory craniotomy performed at the seat of the localized headache and an angioma removed from the meninges implicating the superior longitudinal sinus, cure was complete and unquestioned[1] Results like this in the work of operators of world-wide reputation certainly justify the hope that much may yet be done for many cases of epilepsy, even some not accompanied by the usual symptoms of the Jacksonian variety In the present state of our knowledge, however, we are compelled to limit operative work to cases in which we can find some gross lesion to account for the trouble and those peculiar cases preceded by an aura

Sometimes the disease appears to be due to a scar upon the scalp, or cranial fracture without depression yet attended by irritation of the peripheral filaments of the trigeminus, these are the cases which recover from simple removal of nerve implication by what is designed as a merely exploratory operation—liberation of nerves from adhesions relieving the irritation which gave rise to the nerve storms

Epilepsy due to old depressed fractures is not as promising as Jacksonian epilepsy, judged by results thus far recorded, yet in view of Laurient's statistics of 102 cases operated on with 54 per cent cured, trephining is surely to be advised in every suspicious case At this point I can not refrain from calling attention to the words of Agnew upon the subject of depressed fractures in their relation to epilepsy, he says—and too much emphasis can not be laid upon it—that it is not too much to assume that poor surgery is responsible for the great majority of traumatic epilepsies, because of bad treatment at the time of injury, the old doctrine that depressed fractures of the skull without symptoms of compression require no operative treatment, being responsible for the many unfortunate sequels I quote his own language "However small may be the depression which follows a fracture of the cranium, save in one or two locations, it will encroach enough upon the dural nerves to cause more or less irritation—which, though insignificant at first, and perhaps not at all recognizable to the consciousness of the patient, yet if unrelieved will be transmitted finally to the cortex and brain ganglia until at last the paroxysmal explosion will occur Whenever, therefore, in my judgment, the medical profession can accept the doctrine that *all depressed fractures of the cranium, however slight may be the depression, and entirely irrespective of pressure symptoms, are proper subjects for trephining*, then will traumatic epilepsy largely disappear " To day, people will readily consent, even in the country, to operation at the time of accident if informed that a fracture of the skull is present, and as they become more familiar with the triumphs of aseptic surgery the mild objections now sometimes raised will disappear, and then indeed will the development of epilepsy due to depressed fracture be dependent upon the timidity or ignorance of the attending physician

An injury to the frontal region, as well as to the motor zone, it must be remembered, is a very serious condition, and just as positively indicates operation, for 50 per cent of non-trephined serious injuries to the frontal bone are said, by Garmany, to be followed by epilepsy, mostly succeeded by insanity It may be truthfully added that 40 per cent could be saved by prompt operative measures

INDICATIONS FOR OPERATING

Upon general principles it may be asserted that the sooner operation is made after the development of the epilepsy, the better the prospects of success, yet the lapse of a long time—even years—is not a strong contra-indication, as numerous cases have been reported where removal of the irritation cured the convulsions even many years after the irritation began

The special indications for trephining in epilepsy are one or more of the following

1 An intense headache, always located in the same limited area, either preceding or succeeding the epileptic seizure

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[1] One of my cases of tumor reported in a previous lecture was an angioma of the meninges which caused such severe epilepsy as to produce imbecility

2 Well-defined Jacksonian epilepsy, where the attack invariably begins in the same group of muscles and then involves the whole body

3 The existence of a pronounced and constant aura that may act as a localizing guide, as a numbness in one extremity, etc

4 Traumatic injury to the cerebral cortex, as depressed fracture, etc

5 Semi-paresis or paralysis of any group of muscles not definitely shown to be of peripheral origin

6 Direct evidence of removable lesion in or near the motor area, tumor, abscess, etc

7 Hemi-epilepsy, even of unknown cause

8 Even in cerebral atrophies of childhood, according to Starr, the frequency of the attacks may often be greatly diminished, though not cured—being due to organic changes

PRELIMINARY TREATMENT

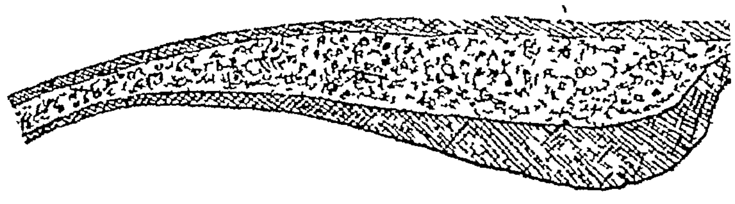
Before resorting to operation (except in cases so plainly indicating surgical measures as to be beyond question) the patient should be subjected to the proper medicinal treatment, at the same time be put under careful observation of attendants thoroughly instructed as to the points to be noted, and repeated personal examinations be made to determine the exact seat of the source of the epileptoginous disturbance Unless the history of the case is perfect as to the part of the body first involved in the attack, the determination of this is the first object to be noted, not at all infrequently the patient feels the spasm beginning in the hand or the foot, or has a sensation of numbness or tingling in some particular part before unconsciousness begins, but in others no such premonition exists, yet the spasm uniformly begins in a certain group of muscles and then gradually spreads until a general convulsion is on, as in one of my cases, the paroxysm consisted only of a convulsive movement beginning in the right hand, extending until the whole upper extremity and face were involved, with loss of consciousness, but no general convulsion To carefully note these details is the object of the observation which may have to be continued for several weeks before the necessary data can be obtained A study of the subject of cerebral localization must coincidently be made if not *thoroughly* understood, or the services of a skillful neurologist engaged to assist in the case

The medicinal treatment should consist of the administration of arsenic and the compound syrup of hypophosphites (National Formulary to be preferred), or other tonics which may be peculiarly indicated in any particular case Bromids must be suspended for some weeks, so that the patient may be freed from their depressing effects The patient is prepared for operation in the same manner as for any other trephining

OPERATION

After a large area of skull has been exposed over the proper region, search is made for external trouble and for fractures—as fissure of the skull so often occurs in apparently trivial injuries that there may be no history of an accident Care must be exercised not to mistake a suture for the line of an old fracture as has sometimes been done If any superficial source of irritation be found it is corrected in the special manner demanded by each individual case, excision of a scar in the scalp, liberation of nerves from adhesions, elevation of depressed fragments of bone, etc Usually it is necessary to open the cranium

If the skull be not too hard, the most speedy and satisfactory method of reaching the dura is by use of the gouge, but if it does not readily cut, the trephine is employed and a "button" removed somewhere near the affected region—*exact* location is not essential as the opening is to be freely enlarged, in fact, a large opening is generally preferable in nearly all cranial surgery, since simple relief from compression is almost invariably of benefit, even though no operation on the brain be made Great care is taken in the use of the trephine in epileptic cases because the skull is likely to vary in thickness to a remarkable degree, even in the space of a half inch, as shown in this specimen mentioned in my last lecture as having been removed for the relief of epilepsy (case of osteoma) From this it will be seen how easily the trephine might injure the brain if applied near the end of the bony tumor



Section of osteoma, actual thickness

As soon as the dura is exposed the Keen's forceps are applied and the opening enlarged to at least one and a half by two inches When sufficient bone is removed the dura is inspected It may be that a depressed fracture has been relieved by removal of the bone—if so the impression in the dura shows it There may have been a fragment of the inner table driven through the dura—if so, it is now visible Osteophytes may have formed—if so, their presence is now discovered Tumor of the meninges or cortex may be the cause of the convulsions—if so, the abnormal teneness of the dura, or even its protrusion into the opening, is an indication for further exploration The examination being completed, a large flap of the dura is now turned back, unless an extra-dural cause has been found and removed, and attention paid to intracranial abnormal conditions

When it is evident that a depressed fracture has been corrected by removal of bone in the act of trephining, it may be taken for granted that the cause of epilepsy has been removed and no further procedure is permissible, unless some special reason exist for opening the dura—a step which adds greatly to the danger So if the operator is satisfied, the scalp is closed with catgut drainage But if spicula have been found projecting through the dura, the membranes are opened and fragments of bone extracted, it is not good practice to seize them and extract them by force, without first making a free opening in the dura, which is afterward sewed up

Quite often osteophytes are found irritating the dura or the brain, in such case the dura is *incised* and the offending foreign bodies carefully extracted Bleeding which oftentimes follows is quite copious and hard to control, a compress of gauze wrung from water at 105 to 110 degrees is applied with firm pressure for three or four minutes and usually is sufficient In some instances it may be necessary to tie some vessel If all other means fail, the tip of the Paquelin cautery may be applied, but it is objectionable and not to be recommended except as a *dernier ressort*, when used free drainage is always provided

Tumors are excised in the manner described in the last lecture, the greatest care being taken to do as little damage as possible to the contiguous brain matter Abscesses are evacuated irrigated and drained

Pachymeningitis, perhaps of many years ago, may be met with localized adhesions or effusion If adhesions, they are gently broken up with much care not to injure the underlying brain, frequently, however, the cortex is very firmly attached to the membranes so that separation is impossible, when so, the particular part of the cortex involved is excised to the depth of a quarter of an inch by means of a very sharp knife or scissors Iodoform is dusted in very freely after removal of the affected parts or separation of adhesions and the wound closed in such a manner as to secure primary union everywhere If old meningitis with localized effusion be found, evacuation with irrigation, breaking up any adhesions present, and application of catgut drainage is all that can be done

Sometimes—and this is occasionally true of very marked Jacksonian epilepsy—the most careful examination fails to show any focal lesion discernible by the eye or the finger, in such instances, Sachs asserts that excision of the affected area is the only rational treatment of the disease and may prove wholly successful if long continued irritation has not permanently injured other centers, and even if a complete cure is not effected, the frequency of the attacks may be diminished to the great comfort of the patient The method is this the motor area is stimulated by the application of electricity (an induced current from a Du Bois-Reymond coil furnished with one Daniell cell, or the Barrett chlorid of zinc battery) by means of two aseptic electrodes of platinum 2 millimeters apart In handling these, the operator must envelop his hands in sterilized towels to prevent contamination, or better still they may be manipulated by an assistant who takes no other part in the operation, and who carefully protects the points from coming in contact with anything beside the brain after they are sterilized As these electrodes are changed from one part of the motor area to another, careful observation will show response in each segment, when the particular spot is reached which causes motion in that part of the body first affected in the attack of epilepsy, the cortical and subcortical substance is excised Bleeding is checked by gauze pressure or hot water—if not, the tip of the Paquelin cautery is applied sufficiently red to stop hemorrhage, the objections to the use of the cautery are that it requires drainage for some days, it causes a scar in the brain tissue much more marked than that following simple excision, and epilepsy may return as a result of excessive scar contraction The wound is well covered with iodoform, closed with a few strands of catgut for drainage, and the usual dressings of sublimate gauze and cotton applied

Following such an operation, paralysis of the extremity will occur, if a large area is cut away the paralysis will be permanent, if a small one, restoration of function may eventually be secured There is considerable danger of death when a large amount of brain tissue is excised—much more than in removal of abnormal growths or deposits

CASES

In regard to Jacksonian epilepsy, one of my cases corroborates the assertion of Lucas Championnierre that the symptoms do not always coincide with the location of the lesion Briefly stated, the facts are these

J B, aged 13 years, when 5 years of age, fell and fractured his skull at the junction of the parietal and occipital bones In spite of great depression of the fragment and long continued unconsciousness, the attending physician did nothing except to adopt the "expectant plan" of treatment The child, however, made a rapid recovery from the accident and seemed in excellent health for some months Then spasmodic movements were noticed from time to time in the hand and arm of the side opposite the head injury These convulsive attacks increased in severity and extent until the whole side became involved and finally general epilepsy supervened The epilepsy continued for years, the intellect finally becoming so impaired that the parents decided to consent to operation

Upon reflecting the scalp I found a marked depression, which upon opening the skull was seen to affect the inner table much more than the outer, quite a fragment having been driven through the dura, this was found lying in a depression in the brain itself After correcting this trouble, I extended the opening in the skull forward so as to permit examination of the Rolandic region I could find no evidence of trouble here, so completed my work without further exploration One severe general convulsion was noted on the third day, but though all antispasmodic remedies have been prohibited since there has been no further epileptic manifestation in a period of more than two years I am therefore compelled to believe that the irritation was transmitted from the posterior parietal and upper occipital convolutions to the motor area

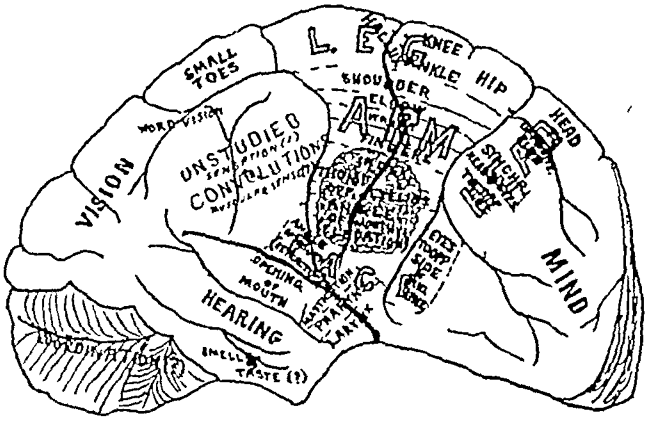


Figure showing known areas in the brain and position of tumor—purely diagrammatic

The local irritation in this case was in the angular gyrus, the supramarginal convolution and the first occipital Whether there was "word blindness" or not I could not determine, as the boy had never learned to read, though he has since done so There was no hemiopia

Upon the other hand, one may *exactly* locate the disturbing lesion and come within a fraction of an inch of its center in opening the skull Thus in the case of tumor, reported in my lecture upon that subject

P P B, of Norris, Mo, 28 years of age, presented the history of rapidly developing epilepsy, due to brain tumor The only localizing symptoms were epileptic seizures beginning in the thumb and index finger of the left hand, the muscles of the eyelid and the angle of the mouth—these followed by the typical symptoms of *grand mal* Upon these "*pointers*" then a trephine was applied, the center pin of the trephine could not be removed and so penetrated the inner table, when the button of bone was removed, revealing a sarcoma of the dura, the center pin was found to have pierced the exact middle of the tumor as shown in the specimen here exhibited!

How was such accuracy possible? Or was it mere chance? Here was a case presenting symptoms in different parts of the body anatomically quite remote from each other Why should they indicate with any degree of precision the location of the tumor?

Examination of the diagram which shows the exact situation of the malignant growth, reveals the fact that the centers which preside over these widely separated sections of the body lie in contiguous fields of the motor region; and as our methods of external measurements are almost as exact as our knowledge of cerebral topography it was an easy matter to decide where to reach the causative agent in this particular epilepsy

A number of other interesting cases of epilepsy have been operated on by me, two of which I mentioned in speaking of brain tumor, but none of the others, I believe, have passed three years since this treatment was instituted—so the time has not yet come for making positive deductions from my own work Yet the results as thus far seen are satisfactory in all but one case—a most dismal failure—and encourage me in the belief that I have done right in operating in every instance, for the amount of benefit already given in the brief interval of three years or less is enough to repay for the time and trouble even though a return of the convulsions should yet occur But I am satisfied a number of the cases will terminate in cure and I certainly shall continue to practice surgical treatment in every appropriate case, unless I meet with more evidences of failure than I have in the past

In conclusion, I offer the following brief synopsis of our present ideas of what should constitute the

RULES FOR TREPHINING

When to Operate —1 An epileptic seizure invariably affecting a single group of muscles, or a general convulsion which always begins in a definite region may be regarded as sufficient guide to trephine over the area of the brain presiding over that particular part

2 An intense *localized* headache preceding or succeeding each epileptic attack is sufficient to warrant exploratory trephining

3 If a general epilepsy follow a depressed fracture the trephine should be advised—though results have not been, upon the whole, particularly brilliant

4 In general convulsive epilepsy if paresis or paralysis of any group of muscles follows (even temporarily) an attack, trephining is admissible at the point indicated by cerebral localization

5 Perversions of hearing preceding a convulsion (auditory auræ) point to trouble in the temporal lobe, exploratory trephining may have to be done upon both sides of the head

6 Hallucinations of vision (visual auræ) strongly indicate lesion in the occipital convolutions

7 An aura consisting of a disturbance of taste or smell justifies inspection of the temporo-sphenoidal lobes of both sides

8 Aphasia (which may persist but for a moment or continue for several hours) sometimes is met as a symptom, and imperatively demands exposure of the left third frontal convolution

When not to Operate —1 No operation is justifiable in general epilepsy without some localizing sign and not dependent upon discoverable injury to bone

2 Operation should not be performed in epilepsy which is clearly due to old pachymeningitis—the risks are too great in proportion to the good results to be anticipated

3 Operation is not to be advised when there is a history of a previous lepto-meningitis (either traumatic, syphilitic or tubercular)

ORIGINAL ARTICLES.

CLINICAL NOTES ON PSORIASIS, WITH ESPECIAL REFERENCE TO ITS PROGNOSIS AND TREATMENT

Read before the Medical Society of the State of New York, Feb 7, 1895

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In his recent work upon the treatment of syphilis, Professor Fournier makes the remark, that too little attention is often paid to the real treatment and cure of the disease, and that too many physicians and patients are content with only the removal of the symptoms as they arise, it thus happens that in relatively few instances is the treatment of syphilis carried out in a patient and thorough manner to a cure It is within the memory of quite young men when that disease was regarded as incurable, and it is only within the last decade that definite rules have been established (largely through the work of Fournier) which, if accurately carried out, will commonly result in the radical cure of syphilis

Much the same may be said in regard to psoriasis, for, thus far, physicians and patients have been far too often satisfied with attempting to remove the eruption as it recurs, again and again, and commonly far too little study and attention has been given to the underlying cause and its rêmoval And yet I believe that the time has come when the treatment of psoriasis should be placed on a much more certain and definite basis than is now generally accepted, and the influence of diet and hygiene in its production recognized and when, consequently, we can offer to our patients much more encouragement as to a real cure of the trouble

To the end of understanding better the clinical relations of psoriasis, and therefore its treatment and prognosis, I have made a study of my recorded notes of 366 cases in private practice, which have been under my personal observation and care These cases occurred among 9,483 miscellaneous cases of skin disease, making it to form almost 4 per cent, it thus comes fourth on the list as to frequency, after eczema, acne and syphilis

In a recent clinical study of 1,000 cases of psoriasis [1] occurring among 25,443 cases of miscellaneous skin diseases in my public and private practice together, the proportion in public practice was found to be 3 69 per cent

The ages of these 366 patients at the time of applying for treatment is shown in the following table

TABLE I —AGES OF 366 PATIENTS WITH PSORIASIS

	M	F	T
5 years and under	1	0	1
5 to 10 years	2	4	6
10 to 15 years	8	12	15
15 to 20 years	17	29	46
20 to 25 years	28	30	58
25 to 30 years	35	28	63
30 to 35 years	43	19	62
35 to 40 years	27	9	36
40 to 45 years	23	4	27
45 to 50 years	16	2	18
50 to 55 years	7	5	12
55 to 60 years	3	4	7
60 to 65 years	2	5	7
65 to 70 years	3	2	5
70 to 75 years	1	1	2
Unknown age	1	0	1
Total	212	154	366

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[1] Trans Congr Internat de Dermat etc, Paris, 1889, p 878, also Maryland Medical Journal September and October 1891

It is here seen that males are affected with psoriasis more frequently than females, there being 212 males to 154 females, respectively 57 92 and 42 07 per cent

The youngest patient seen with the disease was a male nearly 5 years of age, the oldest also a male just 75 years old The largest number of patients applied for treatment between the ages of 25 and 30, when there were 63 patients or nearly 18 per cent of all the cases, but there were also almost as many cases during the five years of life before and after this period Thus, together, during the fifteen years between 20 and 35 years of age there were 183 cases, or exactly one half of the entire number

It is impossible, however, to draw from this table any exact conclusion in regard to the age of the patient at which psoriasis is most likely to develop for the first time, for in many instances the disease had lasted for many years before coming under treatment, as will be seen in a later table In the next table, II, is given the age at which the eruption first appeared, according to the statements recorded in the notes of the cases

TABLE II—AGES OF 366 PRIVATE PATIENTS WITH PSORIASIS, AT WHICH THE ERUPTION FIRST APPEARED

	M	F	T
During infancy	5	0	5
1 year to 2 years	1	1	2
2 to 3 years	2	2	4
3 to 4 years	2	3	5
4 to 5 years	2	4	6
5 years and under	12	10	22
"During childhood"	4	3	7
5 to 10 years	14	18	32
10 to 15 years	22	41	63
15 to 20 years	48	28	76
20 to 25 years	42	16	58
25 to 30 years	19	14	33
30 to 35 years	23	5	28
35 to 40 years	10	5	15
40 to 45 years	7	1	8
45 to 50 years	5	4	9
50 to 55 years	2	4	6
55 to 60 years	1	2	3
60 to 65 years	1	2	3
Not stated	2	1	3
Total	212	154	366

These cases are, perhaps too few to permit any very definite conclusions to be drawn from them, as to the first development of the disease, but a little study of the table develops many items of interest

The disease belongs principally, to the early formative period of life Thus, it is seen that in the largest number of instances, namely 76, or over 20 per cent the eruption was first observed in the period between 15 and 20 years of age, and in a very large number, 63, between the ages of 10 and 15, while, the eruption first appeared in 197 cases, or almost 55 per cent of the whole, between 10 and 25 years of age After this period the number of cases diminishes very rapidly, there being only twelve patients in whom the eruption first appeared after 50 years of age It is seen however, that there are relatively few cases during very early life, there being only twenty two instances in which it appeared before the age of 5 years These facts appear quite opposed to the statement of Neumann[2] who asserts that the eruption generally appears about the sixth year of life

It is a little curious to note that while the females are largely in excess between the ages of 10 and 15, in the next period of five years the number of males is nearly double that of the females, while, between 20 and 25 the males present nearly three times the number of cases found in females The question arises whether the great difference relates in any way to the effect of the later development of the sexual function in males than in females

Psoriasis is known to be one of the most rebellious of all skin diseases, beginning often quite early in life it may persist indefinitely, even in spite of active treatment, and often wears out the patience both of the physician and patient In a certain small proportion of cases it will seem to disappear even without treatment, and to remain absent for varying periods, perhaps entirely Such cases are, however, very rare, and the disappearance of the eruption seems to depend on some radical change in the mode of life, or sometimes follows a change of abode A prolonged residence in a warm climate will occasionally arrest the disease, but it is liable to recur on return to a colder or more changeable climate In some cases it becomes less pronounced after middle life and may become confined to a few lesions, giving little annoyance

The duration of the eruption at the time of applying for treatment is shown in the next table, III

TABLE III—DURATION OF PSORIASIS IN 366 CASES AT THE TIME OF APPLYING FOR TREATMENT

	M	F	T
Under 1 month	7	8	12
1 to 3 months	0	0	0
3 to 6 months	7	5	12
6 months to 1 year	20	15	35
1 to 2 years	10	14	24
2 to 3 years	9	8	17
3 to 4 years	15	9	24
4 to 5 years	12	9	21
5 to 10 years	42	42	84
10 to 15 years	25	22	47
15 to 20 years	23	15	38
20 to 25 years	19	3	22
25 to 30 years	10	2	12
30 to 40 years	8	2	10
40 to 50 years	2	1	3
50 to 60 years	0	1	1
Not stated	3	1	4
Total	212	154	366

This table fully bears out the chronic character of the disease, for there appear cases in it which had lasted thirty years or more at the time of first observation, in a very large number of instances eighty-four or nearly one quarter of the entire number, the eruption had existed from five to ten years previous to the first visit

The natural history of psoriasis is therefore to be reckoned by years rather than by days and months Thus, of these 366 cases, no less than 221, or over 60 per cent had lasted for five years or over

Comparatively few cases were observed at or soon after the first appearance of the eruption, only twelve cases during the first three months, and only twenty-four cases in all during the first six months of the existence of the eruption It will be seen later, that this is a fact of no little importance in connection with the proper treatment of the disease and its prognosis Something more can be learned in regard to the obstinacy of the complaint by a consideration of the periods of time during which these patients were under observation These are shown in the following table, IV

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[2] Neumann Lehrbuch der Hautkrankheiten, Wein, 1873, p 259

TABLE IV—DURATION OF OBSERVATION OF 366 PATIENTS WITH PSORIASIS

	M	F	T
1 month or less (74 seen but once)	95	45	140
1 to 3 months	6	15	21
3 to 6 months	14	16	30
6 months to 1 year	32	28	60
1 to 2 years	18	12	30
2 to 3 years	7	8	15
3 to 4 years	8	3	11
4 to 5 years	5	4	9
5 to 10 years	16	13	29
10 to 15 years	6	7	13
15 to 20 years	4	2	6
20 to 30 years	1	1	2
Total	212	154	366

Here it will be seen that a large number of the cases were seen but for a short time, 191, or over one half, for a period less than six months, and of these, 74 were seen but once, and many others but two or three times In looking over the notes of these cases, we find that some of them yielded to treatment and were apparently cured even in a short time, while many were lost sight of before any conclusions could be reached as to the value of treatment In many of the cases which were for a longer time under observation, the notes show it was often for recurrences of the eruption, for these patients are commonly satisfied with its disappearance, and are seldom willing to undergo prolonged medical supervision with a view to the cure of the disease In studying the records of these cases we find that in proportion to the length of time the disease has already continued, either before or while under observation, in about the same degree will the eruption resist treatment, in other words, as the disease becomes engrafted on the individual, the results are less satisfactory, much as is observed in connection with gout, with which, as we shall see, this eruption is frequently closely allied and, indeed, often closely connected

This brings us to a brief consideration of the nature of psoriasis Any one who has followed out cases of the disease during a period of years must be convinced that it is not a local affection, in the sense in which we speak of epithelioma, verruca, the parasitic eruptions, etc, and it is certain that it is not due to any specific poison introduced from without, as in the case of syphilis and leprosy, nor is there any definite evidence that it is of malarial origin

Every evidence points to the fact that it must depend upon some internal cause, which at one time or another produces the changes in the skin Unless, therefore, measures are taken looking toward the alteration or removal of the internal or general condition underlying the disease, we can not hope for a permanent cure All have been disappointed again and again by the recurrence of the eruption, even after its complete disappearance under local treatment, and all acknowledge the futility of local measures to prevent its appearance or development

What the exact underlying cause of psoriasis is, we are not yet prepared to say, but advances are being slowly made in this direction

Heredity has been commonly supposed to have a very great influence in its production, and many writers state this with considerable positiveness But as far as I can learn by a study of the cases here analyzed, as well as also from the much larger number seen in public practice, this element is of relatively little importance Notes have been taken of all my private cases, and in most instances the patients have been carefully interrogated, both as to the positive and negative aspects of this question The results are tabulated in the following table, v

TABLE V—HEREDITY OF PSORIASIS

	M	F	T
Cases with anterior heredity	28	16	44
Cases with posterior heredity	6	6	12
Cases with no history of heredity	131	111	242
Unknown or unrecorded	47	21	68
Total	212	154	366

ANTERIOR HEREDITY

	M	F	T
Parents affected	22	15	37
Grand-parents affected	3	0	3
Parents and grand-parents affected	3	1	4
Total	28	16	44

POSTERIOR HEREDITY

	M	F	T
Children affected	6	6	12
Grand-children affected	0	0	0
Total	6	6	12

COLLATERAL HEREDITY

	M	F	T
Cases with brothers affected	23	13	36
Cases with sisters affected	25	12	37
Cases with collateral relatives affected	3	6	9
Total	51	31	82

Here we see that of 366 cases only 56 showed any anterior or posterior heredity, in 68 cases there was no definite record, while in 242 cases, or over 66 per cent, there was no history of heredity, either in immediate ancestors or children, and in only 15 per cent was there any assurance that this had occurred. This certainly is not any greater proportion of concurrence than could be traced in many diseases, and bears no comparison with that found in eczema In regard to collateral heredity we find 82 cases in which this was recognized, a no larger proportion than might be expected among brothers and sisters brought up under similar conditions as to diet, hygiene, etc

As remarked before, it is often very difficult to determine with certainty the underlying causes which operate to produce the eruption, for it is observed in those presenting such widely diverse conditions of life, and under the greatest variety of circumstances. It develops with about equal frequency among the poor and the rich Not only will it appear after exhaustive diseases, after pregnancy, and in those debilitated by various excesses, but it comes also in subjects who are apparently in the best of health and enjoying the surroundings of a healthy and apparently proper life No single cause or element, or any combination of causes or elements can be traced i every case The evidence increases, however, that i is more or less closely allied to the blood states which are known as the gouty and rheumatic, and we can often clinically identify the cases belonging to one or the other of these classes Upon our recognition of the base upon which the disease rests will depend necessarily our success in treatment and consequently our prognosis

Undoubtedly the most common systematic condition found is that associated with the still littl understood suboxidation process, which underlies o is akin to that found in gout

Sir Henry Holland[3] says "I can not doubt from my own observations that certain of these (skin disorders often occur as the result of the habit in question (gout) I have so often seen psoriasis, for example, occurring in gouty families—sometimes alternating with acute attacks of that disease, some times suspended by them, sometimes seeming to prevent them in persons thus disposed, that it is difficult not to assign the same morbid cause to these results '

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[3] Holland, Medical Notes and Reflexions, Philadelphia, 1857, p 21

Dr Garrod[4] believes that psoriasis is, perhaps, the most frequent form in which the cutaneous (gouty) disease manifests itself, and that there are many cases in which the skin and joint affection are alternated

Sir Thomas Watson[5] speaking of psoriasis and lepra says "I believe that they sometimes depend upon the presence, or the generation of an excess of acid in the system, and that they are often cured by alkalin remedies, I am sure "

Prout[6] mentions the alternation of leprous and scaly skin diseases with deposits of phosphate of lime in the urine, in patients who have been subject to gout and rheumatism, the urinary affection becoming better as the cutaneous affection has become worse, and vice versa

I have purposely quoted from these older writers, rather than from those of recent date, better known in connection with diseases of the skin, because the tendency of modern specialism has been rather in the direction of the minute study of local lesions, and of the local causes of diseases of the skin and away from constitutional conditions, and consequently the so called humoral views of older writers have been rather overlooked of late

These who have been quoted, (and the number could be greatly increased if desired) were general practitioners and teachers of prominence, and all were experienced and accurate observers, and their opinions should have weight in this, as they have in other matters

These observations, and others made by equally careful and acute observers I can, to a good measure, indorse by my own experience, and many cases in my own practice abundantly confirm their truth As yet, however, no perfectly well defined statements can be made as to the precise condition which may be looked for in all cases, even in those which present symptoms which may be looked upon as gouty, but I believe that real advances will be made in proportion as they are recognized and treated

The urine is often a most valuable guide in the recognition and treatment of the acid state which underlies many cases of psoriasis, and should receive more attention than is commonly the case in the management of this disease In my recorded observations of the urine of patients with psoriasis, this excretion was seldom such as could be regarded as that of health, and although an analysis of the data does not show any very great uniformity in the deviations from the normal, the changes found were such as one should expect in those functional derangements of the liver and other organs which have to do with the metabolic processes in the system The specific gravity in them varied greatly, ranging from 1008 to 1040, in relatively few instances was it below normal, and very generally it was much above the normal point, a gravity from 1030 to 1035 being not infrequent, it was common to find a very great difference between various specimens from the same patient Albumin was found but once, sugar was not found at all, even in specimens with the highest specific gravities, the increased weight being due to urea and organic salts

In most of the examinations I have found very decided hyper acidity, with crystalline deposits of uric acid, urates, oxalate of lime, and occasionally stellar phosphates The cases which present this acid state of the system well marked are commonly characterized by a congested state of the eruption, often attended with burning or itching, and present a marked contrast to the sluggish and indolent eruption shown by those exhibiting simple debility or the strumous state It is not possible, as yet, to determine and express the differences presented by those in whom the acidity takes the rheumatic form, clinically they resemble the gouty cases, but often the rheumatic element will be manifested more or less acutely in the joints or otherwise, of which I have known some striking examples

Whether there is really any difference in psoriasis found in these three commonly recognized states, is difficult to determine I myself am inclined to think that there is but one cause for the eruption, the acid blood state belonging or leading up to gout, this may be developed more or less in the rheumatic and strumous, as well as in those where its fuller development ends in gouty deposit in, or inflammation of the small joints

As may be supposed, the treatment of psoriasis will depend very largely upon the recognition of the blood state or condition upon which the disease depends While most persons with this eruption will appear to be in perfect health, I believe that there is always some departure from the normal which can and should be discovered and reached if the disease is really to be cured In many instances the eruption depends wholly upon pure debility, and a prolonged and most careful tonic course will ultimately overcome the difficulty In the gouty and rheumatic class of cases, undoubted benefit results from a prolonged and faithful alkalin course of treatment, with such remedies as meet the underlying blood state In many cases a strumous habit will be at the bottom of the trouble, the faulty metabolism being dependent on this, and cod-liver oil, phosphates, etc, will be needed, alternated occasionally with alterative doses of mercury I do not allude to cases of syphilitic skin lesions, which often closely resemble the eruption in question, for these have nothing to do with it and should never be spoken of as syphilitic psoriasis A number of writers have reported the cure of psoriasis with full and prolonged doses of iodid of potassium, others have praised antimony, while the number and variety of remedies which have been advocated in this disease are so great that the mere enumeration of them would occupy and waste much time and space, their very number and variety indicate the difficulties attending the treatment of psoriasis, and that there must be causes which are not yet fully understood

There is certainly no single specific for psoriasis, although arsenic seems to come nearer to this than any one remedy, when given in full and persistent doses it often serves to remove the eruption, and to keep it in abeyance Arsenic is a very safe remedy, as the drug is eliminated almost immediately from the system, largely by the urine and, as far as I can learn, no ultimately toxic effects occur even from its free and prolonged use In one instance a patient of mine, a gentleman in whom the eruption began at 22 years of age, took nearly eight ounces of the pure Fowler's solution in a single year, and some time ago he calculated that he had taken over half a gallon of pure Fowler's solution in the course of fourteen years

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[4] Garrod, Reynolds' System of Medicine, Philadelphia, 1868, vol I p 824

[5] Watson Practice of Physic, Philadelphia, 1858 p 1295

[6] Prout Stomach and Renal Diseases Philadelphia, 1843, p 221

But arsenic constantly fails either to remove the eruption or to prevent relapses, nor could we expect it so to do, for the most that arsenic can do is to so control the nerve elements that they shall not be irritated by the acid condition of the blood, when its use is suspended or when it loses its controlling effect, the same condition returns as before In cases where arsenic has seemed to cure the eruption, the blood state which called forth the skin lesions had probably been of but brief duration, and the arsenic had aided the tissue in returning to the normal

In psoriasis, therefore, the patient should be studied, rather than the eruption, his diet, habits of life, the state of the emunctories, the condition of the nutrition, and many features which a careful physician notes and takes into consideration in connection with other complaints My plea is, that one who approaches a case of psoriasis should by no means be content with alone recognizing the local conditions of the skin, and prescribing local measures to benefit them, but that, with broad medical knowledge, he should study the patient and seek to rectify the causes back of the local manifestation on the skin

Time and space fail to fully develop here the details of this interesting and most important part of our subject, but a few of the most practical matters may be considered

As may be judged from what has preceded, alkalies should never be neglected in psoriasis They should not be used sparingly but, taking the urine as a guide, they should be pushed with judgment, and be continued long enough to effect the desired result Potash, lithia, soda, in various forms and combinations, are remedies of incalculable value in this disease

But it would hardly be expected that any one remedy or group of remedies would cure a disease which has been such a *bete noire* to the profession, alkalies alone will not accomplish this, but their free use is only urged in connection with other measures While we know that alkalies are of benefit in gout and rheumatism, we know also that their simple exhibition, without due reference to other remedies, and dietetic and hygienic regulations, will never permanently cure either of these complaints

In psoriasis, therefore, they must also be given in combination with and alternated with other remedies Colchicum is often a great aid, and in sthenic cases aconite often assists greatly, prolonged alkalin treatment will often result in more or less anemia, and iron and manganese will also come in as adjuvants, while strychnia, phosphates, cod-liver oil, and many tonics and reconstructives may be needed in fully overcoming the disease

The proper use of water will also aid in the treatment The acidity of the urine, as is known, is modified by free dilution, and the changes of assimilation and disassimilation which are at fault in psoriasis, are hastened and improved by the free passage of water through the system Treatment by means of mineral springs has long been a favorite one in psoriasis, and undoubtedly many cases have been greatly benefited by the use of medicinal waters of many and various kinds

One objection to the treatment of psoriasis by means of visits to mineral springs is that, as a rule, these visits must necessarily be short, and while they may possibly be of service at the time, it is impossible in this brief period to so modify the system that the eruption shall not return when the active treatment is omitted, the patient is often thus misled into a neglect of the proper protracted course of treatment which can alone be of permanent benefit After many visits to many mineral springs, in this country and Europe, I have become more and more convinced that the single element which is of value is the water common to them all I, therefore, advocate the free use of common water to psoriasis patients taken, as at the springs, hot, and on an empty stomach, a half to an hour before meals When very convenient to the patient, I also advise visits to mineral springs as an adjuvant, during the summer months, when the regular treatment is apt to be neglected, owing to absence from personal supervision

But, as in pronounced gout, simple medication will not remove and keep away the disease without aid from diet and hygiene, so in psoriasis these aids are necessary The effect of a full and stimulating diet is often shown in psoriasis by a rapid increase in the eruption, in its congested and irritable character, and in the freer production of scales, whereas a light and unstimulating diet, with total abstinence from alcohol, will often be followed by an improvement in the eruption Everything which contributes to the production of an acid state of the system also tends to increase the skin difficulty, and every indulgence in sweets, pastry, fermented wines and beer or spirits may precipitate an attack and will always aggravate the existing eruption

Excessive meat eating will also increase the disease which, however, will frequently improve with much greater rapidity under the same treatment as before, when the quantity of meat taken is greatly lessened or when it is entirely cut off I have a considerable number of psoriatic patients who have taken no meat, or only very little fish and white meat of poultry, with the result of being free from the eruption for a long period of time Fatty matter, however, if properly digested, will aid in removing the diseased state

Hygiene is also often of importance in psoriasis. This includes proper attention to the clothing worn, to exercise, and to the mode of life Pure wool should be worn next to the skin, to prevent all chilling of the surface and check of perspiration, which I have repeatedly seen followed by outbreaks of the eruption Exercise should be moderate, but sufficient to keep the circulation active, and this will often need to be inquired into and directed by the physician, as also the general mode of life, hours of eating and sleeping, etc, for few patients fully understand or carry out the rules conducive to a perfectly healthy life A warm and equable climate undoubtedly conduces to the cure of the disease, and raw and damp cold climates, and sudden changes of season, tend to develop and perpetuate the disease I have known patients to remain quite free from the eruption as long as they resided in the tropics

The local treatment of psoriasis is undoubtedly very important, very much can be done by it in the way of more rapid removal of the eruption present, and their use should never be neglected. Many remedies, including chrysarobin, pyrogallic acid, salicylic acid, naphthalin, gallaceto-phenon, aristol and others, all are of great value, and by means of one or the other of them the eruption may often be promptly removed. Bathing of various kinds, including sea bathing, is also of much assistance. But it would lead beyond the limits intended, to consider these in this paper, which is intended to show the importance of constitutional rather than local measures in obtaining the really best results in psoriasis.

The prognosis of psoriasis has always been most unsatisfactory. While all recognize that the eruption may be removed again and again by *local treatment*, the majority of writers imply, if they do not assert, that the disease is very uncertain of cure; and I find that this view of the case is taken more or less strongly in proportion as the writer emphasized more or less strongly the value of local treatment.

But to return to the remarks made at the opening of this paper: as in the case of syphilis the ultimate cure depends largely upon the intelligence, faithfulness and persistence put into the treatment by both the physician and patient, so in the case of psoriasis, its cure depends upon the same elements.

I believe that psoriasis can and should be cured; but, as in the case of syphilis, relatively few cases are cured so as to never give further manifestations, so in psoriasis it is often extremely hard for the patient and physician to patiently persist in the plan of treatment which will end in a permanent cure.

It is very difficult, indeed next to impossible, to give any statistical presentation in regard to the cure of the cases which have been here analyzed, for in a consultation practice, drawn from many quarters, the patients are so commonly lost sight of and so rarely seen when freed from this trouble, even as in olden time only one of the ten lepers returned to give thanks for his cure. But from a considerable number of cases with whose later history I am acquainted, I feel positive that sufficient knowledge, care and patience on the part of the physician and patient will result in the real cure of this complaint, which has too often been relegated to the now lessening category of incurable diseases.

4 E. 37th Street.

PHENACETIN AS A TOXIC AGENT.

Read before the Section on General Medicine of the Texas State Medical Association at Dallas, April, 1895.

BY DAVID CERNA, M.D., PH.D.
DEMONSTRATOR OF PHYSIOLOGY AND LECTURER ON THE HISTORY OF MEDICINE IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF TEXAS, ETC.

Phenacetin has such a wide range of usefulness as a remedial agent, that it may not be uninteresting to bear in mind some of the toxic effects which the drug is liable to produce. Notwithstanding the fact that phenacetin (with the exception, perhaps, of phenocoll) seems to be the least poisonous of the coal-tar derivatives, *yet in sufficiently large amounts it may* cause serious after effects and undoubtedly, death.

With the collaboration of Dr. William S. Carter, I have carefully studied the physiologic actions of phenacetin in an extended series of experiments upon the lower animals.[1] Dr. Carter and myself did not notice marked untoward symptoms, even when the remedy was administered in comparatively large doses, nor did we observe any particular changes in the character of the blood itself, changes which, according to other investigators are sometimes produced. Later observations, however, lead me to the belief that phenacetin, especially in large quantities does cause alarming symptoms, chief among which may be mentioned a markedly disordered circulation accompanied with symptoms of collapse. These symptoms have been noticed both in the lower animals and in man.

The fact must not be lost sight of that phenacetin may be adulterated with acetanilid, and other substances, and it is possible that to this adulteration *may be due some of the poisonous effects attributed* to the drug in question, as reported by various writers. Thus in a case published not very long ago,[2] in which serious symptoms of poisoning were observed, it was found that the powder given as pure phenacetin consisted really of equal parts of this remedy and of acetanilid. Again, Reuter[3] has called attention to the fact that phenacetin contains at times some unconverted paraphenetidin, this latter substance producing, even in small doses, toxic effects, especially nephritis with albuminuria.

But be all this as it may, experimental investigation and clinical evidence have shown that phenacetin *per se* exercises a toxic action, particularly when it is ingested in excessive quantities.

Kingsberg and Kast[4] found that large amounts of phenacetin produced in dogs an irregular gait, rapid respiration, vomiting, somnolence, cyanosis and discoloration of the blood, asserting that this latter phenomenon was due to the conversion of hemoglobin into methemoglobin. The same opinion is entertained by Hare[5] in his able essay. Muscular weakness under the influence of phenacetin, probably due to a spinal action, has been observed by Mahnert.[6] Hoppe[7] has reported a case, that of a student, in whom two grammes (30 grs.) of the drug caused insomnia, weakness, inability to stand, and a slight ptyalism. Hollopter[8] records the case of a woman, who, having taken about a gramme and a half (22 grains) in the course of six hours, showed the following symptoms: great dyspnea, general marked lividity, restlessness, precordial pain, inability to stand, involuntary defecation, dilated pupils, cold perspiration. She finally recovered under the use of ammonia and alcohol. The blueness of the surface of the body, however, lasted for more than three days. For over a week the patient was unable to be around the room, convalescence being very slow. Mahnert[9] has observed urticaria, and Hare[10] has seen large wheals, following the use of phenacetin.

Through the courtesy of a brother practitioner (whose name I have been requested to withhold), residing in a prominent city of the State of New York, I am enabled to report the following highly interesting case of phenacetin poisoning, which seems to corroborate much of what has already been stated in regard to the matter.

A healthy mother who had given birth to two healthy children, which had thriven and are now living, was delivered early in the year (1895) of a child weighing six and one-half pounds, after a two and a half hours labor The presentation was R S P, the legs extended against the front of the body, the placental insertion low and posterior, as diagnosed before labor by the location of the round ligaments and confirmed by the clean cut hole in the membrane close to the placenta found after delivery A large amount of liquor amnii was present The child was very rapidly expelled by pressure on the fundus, the delivered parts were enveloped at once in flannel, without traction, the flexed arms were slipped out readily, complete flexion of the head was maintained by pressure through the abdomen and on the face, so that no traction was made on the neck (Wigand-Martin method) and the funic pulse was certainly not arrested two minutes up to the time when the mouth was brought up to the vulva, swept clean, and the child began to breathe Then the head was very slowly shelled out At no time was much force required, at no time was the child cyanotic, and at no time was there any indication of convulsive movement or attempt at respiration before birth A good pink color, regular respiration and heart action, were present from the first, so that it is not in the least likely that cerebral or spinal injury, or inhalation pneumonia, could have accounted for the subsequent cyanosis The child did well until its fifth day, losing less than half a pound On the fifth day a slight diarrhea developed, without temperature and without sepsis from the navel, which sloughed off that day Three grain bismuth powders three or four times a day were ordered for the diarrhea They were in a pink box which had been used for the other child, about a year old at this time On the sixth day, four of the powders were given, making seven in all, the diarrhea ceasing On the night of the sixth day the baby was very fretful and somewhat weak, and purplish in color On the seventh day the eyeballs were jaundiced, color dusky, and the child restless, but otherwise her actions were entirely normal except for some hebetude The digestion was good, the pulse of fair quality—130 to 140—the temperature in the rectum, respiration, and pupils normal, but on the seventh and eighth days the lips and finger nails were black and the extremest cyanosis was present On the eighth day, Prof Charles Jewett went over the case carefully, confirmed the statement that the lungs were entirely clear, and found nothing whatever to account for the condition On this day bloody urine in large quantity was passed The prognosis was very bad and the child looked as if it could live but two or three hours at most when seen by Professor Jewett Without much hope, oxygen was ordered On the ninth day it was seen that during the night, after about the fourth application of oxygen (ten minutes out of each half hour) that the color had somewhat improved with each administration, and the action was distinctly soothing The stools on this day became of a coffee color, the temperature 100⅖ degrees F, and the baby, as always nursed well

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[1] Notes on New Remedies, September, 1892.

[2] London Lancet, Dec. 20, 1890.

[3] Pharmaceutis Zeitung, March 21, 1890.

[4] Centralbl. f. Gesammt. Therap., April, 1887.

[5] Fever: Its Pathology and Treatment, 1891.

[6] Deutsch. Med. Wochenschrift, xiv, 1888.

[7] Therap. Monashefte, ii, 1888.

[8] Medical News, 1889.

[9] Loc. citat.

[10] Loc. citat.

From this time on the baby had ups and downs, the cyanosis continuing but never as grave in degree The case had practically no history except the cyanosis of varying intensity The oxygen was efficient for only two days On the eleventh day the promise was brighter, the child not pink, but the duskiness distinctly less, though from this time on marked jaundice was present, with less color in the urine, anemia of a very high degree, and pronounced weight-loss The pulse about this time was weak for a couple of days, at no time above 150, and the temperature never above 100⅕ degrees F Before the thirtieth, the original weight was regained, and by the fiftieth the anemia was nearly gone

Just after the consultation, the physician, author of the foregoing report, found two powder boxes of exactly the same appearance, one labelled "for baby's diarrhea, three or four times a day," and the other labelled, "For the other child's fever and pain —not over three a day" The nurse then found that she had given seven 2 grain doses of phenacetin, instead of seven 3 grain doses of bismuth, on the first day, 6 grains, on the third day 8 grains, and that it was on the night subsequent to the last dose in the evening, that the cyanosis began

Somewhat elaborate details concerning the delivery, etc, have been given in order to show that no injury during delivery, or other cause, could explain the condition of the little patient adequately It was, undoubtedly, a pure case of phenacetin poisoning

No comments seem necessary on the above report It may not be out of place in this instance, however, to recall the observations of Reuter[11] regarding paraphenetidin which phenacetin sometimes contains as an impurity, and which, it is believed, causes toxic effects even in small quantities The author just referred to gives the following method for the detection of paraphenetidin in phenacetin, "2 5 grammes (38¾ grains) of chloral hydrate are melted in a small test-tube on a water bath, and 0 5 gramme (7¾ grains) of phenacetin added Upon shaking, a solution will be formed, and if the phenacetin be absolutely pure the solution will remain colorless for at least five minutes, but after that time will assume a rose-red color If, however, the paraphenetidin be present, and it be exposed to the same temperature on a water-bath for not more than two or three minutes, the solution becomes colored, according to the quantity of contamination present, into more or less intensely violet, varying from a red violet to a blue violet".

In conclusion, I may be allowed to remark that in cases of poisoning by phenacetin, cardiac and, more especially, respiratory stimulation by drugs would be useful The results obtained in the case herein reported, in which oxygen inhalations seemed to do well, and in that reported by Hollopter, in which stimulation by ammonia and alcohol acted efficiently also, are self explanatory In a given case, prolonged artificial respiration as a last resort would seem to be particularly indicated

AN AURAL MASSEUR

BY CHEVALIER JACKSON, M D

PITTSBURG, PA

The accompanying illustration shows an instrument which has yielded me splendid results in the treatment of non-purulent middle-ear disease during almost three years Until I devised it, I scarcely knew what to do with the class of cases that come with a story something like this "Doctor, I came to see if you could do anything for me I am hard of hearing and have annoying noises in my ears I am told that both my throat catarrh and Eustachian catarrh have been cured My general health is good Yet my trouble is growing worse I have a bag and have Politzerized myself until I am sick of it I seem to have gotten all the benefit that it will yield me Can you do anything for me, Doctor?"

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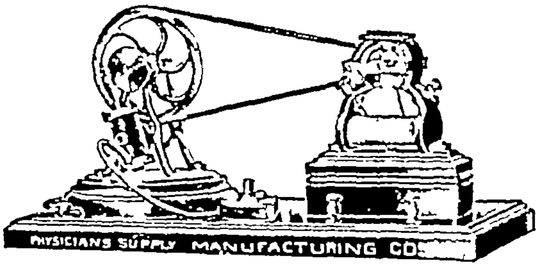
[11] Loc, citat, also Annual of the Universal Medical Sciences, 1892

I had often been at "my wits' end" trying to suggest or do something that had not already been suggested or done in such cases But for nearly three years past I have been able, with the aid of the instrument illustrated, to get results that seemed marvelous considering the obstinacy and chronicity of this class of cases

The action of the instrument is practically on the principle of pneumatic massage I used to apply pneumatic massage by means of either a Siegle speculum or a bit of rubber tubing—in either case operated by the mouth, rather an indelicate procedure Then I tried operating them with a syringe I have also used the Delstanche But with none of these did I get anything like the results that I have since obtained from the use of this masseur


PHYSICIANS SUPPLY MANUFACTURING CO.

Its construction and operation will be readily understood from the following description, by reference to the cut It consists essentially of a cylinder oscillating on a central pivot, and within this cylinder a piston moved up and down, by being connected with a revolving crank disk Motion is imparted to the masseur by a small electric motor run by a battery, storage cell, lighting circuit or other source of electricity It might be operated by a crank arrangement A rubber tube leads from the bottom of the cylinder and ends in an ear piece to be inserted in the external auditory meatus of the patient When the instrument is set in motion, the moving up and down of the piston within the cylinder causes a to and-fro motion of the column of air confined in the tube and meatus, resulting in a to-and-fro motion of the membrana tympani and ossicula And if we start on the exhaust stroke, with the plunger down, the first half of each revolution of the crank disk will draw the membrana tympani outward, and the second half of each revolution will release it and allow it to resume its former position When operated in this way, by starting on the exhaust stroke, the result is not simply the *to and-fro* motion of the membrana tympani, but is an alternate *withdrawal* and release Considering the pathologic conditions present, to this may be attributed the very much better results from this instrument than are obtained from the Delstanche or Sieglé However, be the true reason what it may, there can be no question as to the fact that the results *are* better The ear piece is placed at an air-tight fit into the meatus, and the energy of action regulated by placing the crank pin in one or another of the holes in the crank disk These holes vary in the distance of their location from the axis of the shaft, the farther the crank pin from the axis, the longer (therefore the more energetic) the stroke The energy of action could be regulated by making a more or less tight fit of the ear piece in the meatus, but if this is resorted to the exhausting action is lost and this I think, is a disadvantage A very mild action has given me the best results

It has seemed most advantageous to apply the masseur every alternate day, sittings of thirty seconds to a minute duration, the masseur making from one hundred to one hundred and fifty revolutions to the minute Knowing well how treacherous is enthusiasm I have refrained from publication until the instrument had been fairly and faithfully tried and the permanency of the results observed As this has covered a period of two years and ten months, the present writing will seem not unduly hasty and the results entitled to be considered mature

The word "benefited" is meant to include both relief of tinnitus and increase of hearing distance In many cases the relief of both these symptoms was so marked and so immediate from a single sitting that the patient was greatly delighted In some cases the results were but slight at first and increased at each subsequent sitting, while in other cases the benefit only appeared after a number of applications Psychic effect was marked, patients were fascinated But great care was taken to eliminate error from this in the records, which are of the cases of my own and those of Shirls Jackson

Here is a resume of my results

Total number of ears treated	100
Number of ears treated that were better than contact	61
Number of the latter benefited	46
Number that could only hear watch on contact	39
Number of the latter benefited	19
Percentage of benefit in cases better than contact	75
Percentage of benefit in cases not better than contact	48
Percentage of benefit in all the cases	65

Cases that could only hear on pressure, not on mere contact, were not isolated in the records

Unlike Politzerization the application is not disagreeable to the patient and is readily applied to any one, regardless of the ability to swallow water at command Children do not object to its repetition, and it has yielded good results in a few cases when promptly used in ear trouble following acute diseases

Taking it all in all, my results have been much better since adding this instrument to my armamentarium

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EXPERIENCE OF AN AMERICAN PHYSICIAN IN MEXICO

BY D H GALLOWAY, M D

CHICAGO

A Case of Cancrum Oris —One day happening to be in the dispensary conducted by Dr Salmans, in Silao, I saw a child brought in which the Doctor had no sooner seen than he exclaimed "Take it away! It will die!" Although I had never seen a case of cancrum oris, it was scarcely necessary for him to name the disease The appearance and odor were something frightful, and death was then but a question of a few hours When the Doctor had finished prescribing for the thirty or forty patients waiting, I asked him about the disease He told me that in some two years' practice in that state, he had seen eight or ten cases of this dreadful malady, that he did nothing more than tell the people that the disease would be fatal, and dismissed them He also informed me that the Mexican doctors pursued the same course This was not so much from a belief that the disease was incurable, as from the fact that the people among whom it occurred were too poor to pay for treatment, and too indifferent and ignorant to cooperate energetically or intelligently with the physician in its treatment My duties in the medical service of the railroad company were sufficiently light to leave considerable time at my disposal I requested the Doctor to turn the next case over to me, and if much deformity had not already been caused, I would attempt its cure In most cases a large amount of tissue had been destroyed before the doctor was consulted In such cases the chances that any treatment would stop the course of the disease are very slight, moreover, when such deformity had already been produced it would seem inhuman to try to save the child's life, for such a child would be a constant source of misery to itself and all about it as long as it lived, where the over-production of babies is so great that even the vigorous and healthy can not get enough to eat, the maimed will fare badly indeed

September 6 I was again in the dispensary, when a woman brought in a child, a glance at whose face and a whiff of the horrible stench which preceded it, being sufficient to identify it as a case of cancrum oris The Doctor told her to take the child out of the room, that it would die Tears filled the mother's eyes as she left the room, this unusual exhibition of feeling reminded the Doctor of my offer, and he suggested that this would be a good case to begin on I followed the woman outside and told her that if she would do exactly as I should direct, that I would undertake to cure the child To this she readily agreed The boy's name was Juan Sanchez, and he was 2½ years old Like all of this class he was fearfully filthy, and I instructed the mother to take him home, give him a thorough scrubbing, from head to foot, and bring him to my office This would not only make him a little less loathsome to handle, but would also be an earnest of her desire to have him live In a short time she appeared at my office with the boy cleaner, probably, than he had ever been before or would ever be again I placed two chairs facing each other, outside of the door, gave her one and I took the other I had the mother hold the child on its back in her lap, in such manner that she could perfectly control its hands and feet I then took its head between my knees, as in a vise, first covering my knees with a newspaper that I might be less likely to infection by pediculus capitis

The disease had started around the upper central incisors The upper lip was edematous, so that it projected beyond the point of the nose, the swelling extending to the cheeks The blackening had not involved the lips, but extended for a considerable distance on both sides of the teeth With a pair of dissecting forceps I removed the two teeth and scraped away the blackened portion As I did so the connective tissue strung out like hair Then I took an absorbent cotton wad on a toothpick, dipped it in strong nitric acid, cauterized the discolored surface, and in a few minutes washed it with water I then dismissed her with instructions to come to the office every morning The next morning, Sept 7, I treated it with a saturated solution of copper sulphate in water Blackened spots had reappeared, and these I picked out with forceps before using the wash September 8 I removed the rudiments of the secondary set of teeth and a portion of the alveolar process, used strong nitric acid and followed with the copper solution On the 9th I repeated the copper sulphate treatment Pus was coming from the nose in great abundance September 10 the child first began to show signs of improvement, and from this time on it slowly became better, under the use of the sulphate of copper every day The edema gradually lessened and some effort toward repair of the damage was apparent Nearly every morning I found one or more black spots, like pin heads, and this treatment was continued twenty-two days For several days no blackening was to be seen and the wound was covered with healthy granulations

I did not see the case for four days, and then found the cavity almost completely filled up, mucous membrane had formed over it all, and the only mark left by the disease was a cleft through the alveolar ridge probably one-sixteenth of an inch wide, having something the appearance of a cleft palate To me the most remarkable thing about the case was the filling-in of the dental arch as perfectly, excepting the slight cleft, as it had been before the teeth had first made their appearance I was absent from the city for a month, and on my return was unable to find the patient I was anxious to know whether the cleft became smaller I do not believe it would ever entirely close up The boy would never have any upper central incisors

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ECTOPIA TESTICULI

BY JNO MADDEN, M D

MILWAUKEE, WIS

The drawings herewith submitted are to illustrat a case of, and an operation for the excision of a ectopic testicle, made by the author on March 4 o the present year The patient is a young man, 2 years old Four or five years ago he first noticed bulging at the left external abdominal ring whic was accompanied by a dull pain extending to th loins and back For one, two or three weeks th bulging would disappear, during which time he fel no discomfort

An examination of the part while the tumor wa present, disclosed only the presence of a mass of sof tissue in the inguinal canal, in the midst of whic could be felt a cord which was taken to be the sper matic cord The conclusion was therefore reache that the testicle was within the abdomen, its descen prevented by the smallness of the internal abdomin ring, and that the cord felt was the spermatic cor bent upon itself, the testicle presenting head for most at the internal ring An operation was advise either to bring down the displaced organ and secu it within the scrotum, or, in case this was found in possible or impracticable, to remove it altogether

On cutting down into the inguinal canal some dif culty was experienced in getting hold of the "cord for the tumor was not then presenting It wa finally reached, however, and drawn down, when small testicle appeared just without the intern ring, firmly held by a cord behind it It was the discovered that the supposed cord in the inguin canal was the epididymus, which, with one end a tached to the testicle, trailed down the inguin canal (see Fig 1) The real cord of the testic proved to be so short that it could not be pulled far o of the internal ring It was therefore ligated wi double ligature and cut off close to the testicle Fig 2 is a drawing made from the object and very accurately represents the parts removed

The wound was closed with the continued (etage) catgut suture (Fig 3), embracing all of which were five stout interrupted silk sutures (Fig 4) Nothing disturbed the patient's convalescence

It should be remarked that the right testicle of this subject is in the normal position, and seems to have reached a development compensating for the lack of development in the displaced organ

In 1887 the author removed a very large testicle from the inguinal canal of a young man 19 years of age *This was also on the left side A microscopic* examination showed the organ to be the seat of very extensive sarcomatous degeneration This patient died of exhaustion about six weeks after the operation, and a post-mortem revealed enormous sarcomata of the supra renal capsules

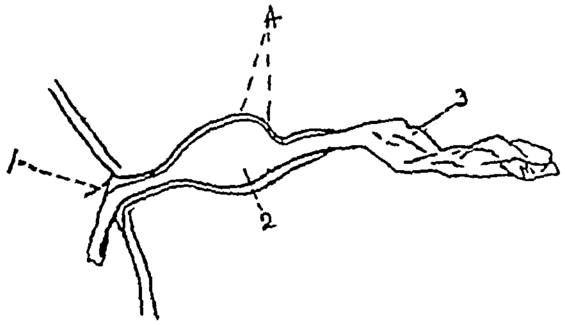

Fig 1—1 Internal ring 2 Testicle 3 Epididymus 4 Prolongation of abdominal peritoneum making tunica vaginalis

In recent years the literature of this subject has become quite extensive, but still there is not enough material at hand to establish any well-defined rules of surgical procedure Indeed, it is more probable that each case will continue to present a distinct problem, to be solved according to the nature of the surrounding conditions If, as some operators seem to think, the atrophied ectopic testicle would develop after being brought into a normal position within the scrotum, a good deal of effort should be made to accomplish this object The most favorable report I have been able to find, in which the object of the operation was to replace (or rather transplant) the ectopic organ in the scrotum is that of Jalaguier (*Le Bulletin Medical*, Paris, March 5, 1894) He reports fifteen cases in thirteen subjects Herniæ co-existed in six cases In two "the testicles became normal in size in from thirty to thirty-six months" In twelve others, at the end of three to fifteen months, the organs were "movable, sensitive, of normal consistency, and showed no disposition to retract" This author is of opinion that, in retained testicle, there exists a fibrous band connecting the testicle with the cribriform fascia and confining it He advises operation in all cases where the subject is over 5 years of age, and in cases connected with troublesome herniæ

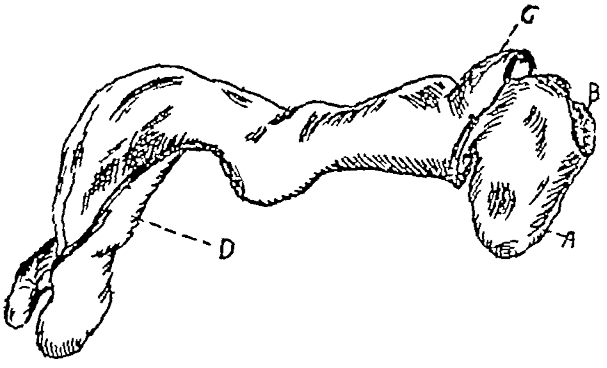

Fig 2—A Testicle B Cut surface where end was severed C Tunica slipped back. D Epididymus (natural size)

Torillon (*Le Bulletin Medical*, March 8, 1894) reported six cases, congenital hernia in four, operated on by himself In three cases "result was satisfactory" In one, the testicle retracted to its former site, and in two atrophy took place

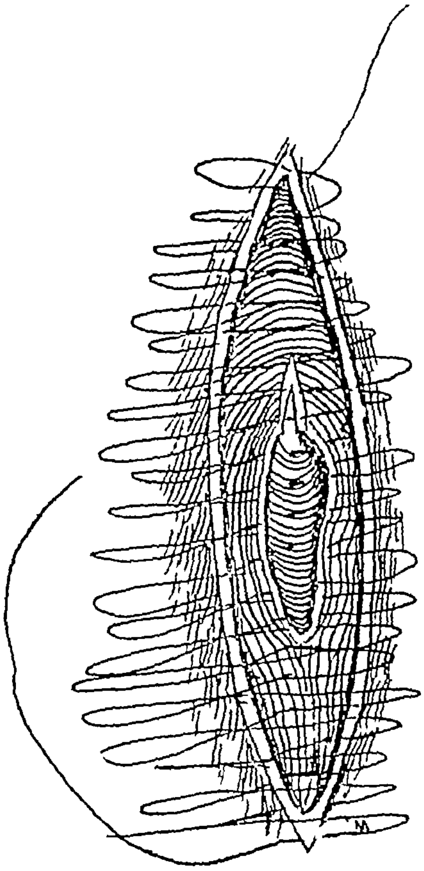

Fig 3—*Etage Suture for obliterating Inguinal Canal A Closing wound*

W Von Schuttler, of Finland (*Lyons Medical*, Lyons July 16, 1894) reported two cases operated on by him, one and a half years ago, in which the result was good In two other cases (date of operation not given) he performed castration because the displaced testicle could not be fastened in the scrotum In all of his cases hernia existed, and, in one of them, the hernia was strangulated

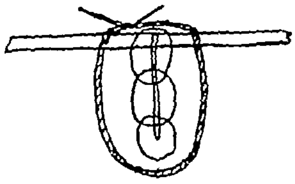

Fig 4—Sectional view Etage and Interrupted Sutures

Guibert of Reims (*Annales des Maladies des Organs Genitourinares*, March, 1894) reported a case of abdominal ectopia of both testicles in a boy of 18, upon whom he operated a year before, bringing one of the displaced organs into the scrotum At the time the report was made, the subject was said to have "one good testicle in the normal position, normal erections and emissions in which there were some good spermatozoa, while others were deformed and broken " As the condition of the subject in respect to erections and the nature of the semen before the operation is not given, this evidence of improvement is not very valuable

Felizet (*Le Bulletin Medical*, March 12, 1894) makes the observation that "when the organ is movable, it is generally normal in form, volume, and consistency and will descend if enlargement of the inguinal canal takes place, but when fixed is usually altered in size and texture and is painful " My own recent case contradicts this statement, for this testicle was freely movable but very much atrophied and painful

At a meeting of the London Medical Society (*Lancet*, April 16, 1894) Mr C B Keetley reported two cases upon which he operated to bring the testicle within the scrotum In one of these cases he was unable to bring the organ down far enough to fasten it in the scrotum He had therefore made an incision in the thigh, opposite a corresponding incision in the upper part of the scrotum where the testicle was fastened and covered by uniting the scrotum with the thigh In this position it was allowed to remain five months It was then brought down and fastened in the scrotum where it remained A discussion arose as to whether an atrophied ectopic testicle would grow when artificially transplanted in the normal position Mr Keetley replied that the organ had "already grown "

In 1890 (*Lancet* February 1), Mr Watson Cheyne reported two cases in the same subject In this case the testicles were lying in the inguinal canal, " but could be made to come down through the external ring " The right side was operated on a year before by suturing the testicle to the bottom of the scrotum and closing the external abdominal ring, passing some of the sutures, used to close the ring, through the cord and skin The result was fairly satisfactory Ten months after, the left side was operated on In this case, the surgeon passed a silk ligature through the cord above the testicle, brought it through the bottom of the scrotum, and tied it to a bar of wire projecting from a frame made fast to the perineum The stitch was removed on the eleventh day and the testicle remained in the scrotum

Of the American cases we find one reported by E A Balloch, of Washington, D C, *Medical Record*, August 6, 1892) In this patient who was 47 years old, one organ was removed in 1889 and the other in 1891 for "painful orchitis "

Dr O L Bartlett of Rockland, Me, operated successfully in 1892 on a subject in which the left testicle was invisible and the right in the inguinal canal The right gland was put in its proper locality and "sexual power was perfect" Hamilton Williams, M D, of Brooklyn, reported (*Medical Record*, Dec 7, 1889) a case of sexual hypochondria in a subject, in which there was an absence of the right testis, while the left was in the inguinal canal An operation upon the left was attended by success in all respects Dr Gerster, of New York, reported a case in 1886, in which ectopic testicle was a complication of hernia, castration was performed and the testicle was found to be sarcomatous

Two considerations must influence our judgment in deciding what is best to be done in dealing with this class of cases Investigation has shown (see article of H. Royes Bell in "Int Ency of Surgery") that the ectopic testicle is not productive of virile spermatozoa To this rule there seems to be but few exceptions The second consideration is the liability of the retained organ to undergo destructive inflammation or malignant change Of the thirty-six cases mentioned in this paper, two were removed because of long standing orchitis, and two were the seat of sarcomatous degeneration Thus 11 per cent of the ectopic organs were the seat of destructive disease It would seem, then, that in subjects possessing one healthy gland normally situated, the atrophied and useless testicle should be promptly sacrificed

In case, however, both testicles are retained, the justice of adopting measures for their preservation is apparent Should it finally be demonstrated that an ectopic aspermatozoic testis may become virile when put in its normal place, there will exist sufficient reason for making every attempt to do so

63 Sentinel Building

ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER 1854-1894

BY JOSEPH JONES, M.D, LL D

NEW ORLEANS LA

(*Continued from page 669*)

CHAPTER X

Case 2—Yellow fever, black vomit, death John Sullivan entered Charity Hospital Oct 8, 1873, about fourth day of disease, great congestion of capillaries of face, neck and extremities, jaundice, hiccough, nausea, pain in head especially in frontal region Pulse 82, respiration 28, temperature of axilla 98 2 October 9, 8 A M, pulse 72, respiration 28, temperature 97 1, black vomit The liquid ejected in abundance is of low specific gravity and strong acid reaction and contains numerous dark specks and flakes resembling coffee grounds Hands feel cold Great congestion of peripheral capillaries Jaundice, conjunctiva of eyes congested and yellow, tongue red at tip and edges *Gums very red with* some oozing of blood Patient says that he has pain everywhere Urinary excretion suppressed 8 P M, pulse 80, respiration 30, temperature 99 2 Spits up black vomit all over the bed

October 10, 8 A M, pulseless, respiration 40, temperature 92 2 Suppression of *urine* *Patient restless* and delirious Spits up black vomit which resembles black liquid blood Died at 10 A M *Temperature of axilla at moment of* death 99 2 There was no rise of temperature after death Examination of black *vomit*, *clear straw-colored* liquid, holding in suspension dark coffee-ground-looking flocculi and flakes resembling *coffee* grounds, which settled to the bottom of the vessel, when the liquid was allowed to remain at rest Reaction strongly acid *The reaction was found* upon analysis to be due to acetic and hydrochloric acids Under the microscope, I *observed broken capillaries*, cells of mucous membrane of stomach, blood corpuscles and angular masses of hematin and *cells of the* gastric mucous membrane stained with hematin Numerous bacteria and rotating animalculæ, *about one ten thousandth* of an inch in diameter rapidly appeared and increased in numbers Specific gravity of black vomit 1004 When filtered, the colored blood corpuscles, masses of hematin, and mucous cells remained *on the filter*, and a clear, light, straw-colored liquid passed through The filtered liquid gave a heavy precipitate with *nitrate* of silver, and a mere turbidness with the chlorid of barium Nitric acid produced no precipitate in the filtered liquid The graded solution of the nitrate of the per- (red) oxid of mercury used in the analysis of the urine after the method of Liebig produced a heavy white precipitate from the presence of urea The usual process for urea in the blood and organic liquids revealed the presence of urea This specimen of black vomit was collected October 9 at 10 A M Upon carefully tasting the black vomit I found it to be decidedly bitter like bile, although I was unable by chemic tests to detect either the coloring matter or the acids of bile The black vomit became thicker toward the close of life, and more nearly resembled dark grumous blood During the last thirty six hours of life, this patient emitted a foul stench, and presented a horrible appearance, with the dark filthy stains of black vomit on the bed clothes and even the sides of the walls streams of black vomit running from the corners of his mouth, and immense swarms of flies hovering over and around his bed

Post-mortem examination results similar to those recorded in many other cases of yellow fever already presented in detail

Case 3—Yellow fever, black vomit, death Daniel Mc Monagale, age 18, native of Ohio, left his native State two years previous to the present attack, resided in Memphis and Vicksburg, and has been in New Orleans two weeks has had chills and fever at various times during the past two months Entered Charity Hospital evening of Oct 11 1873 I saw this patient for the first time on the morning of October 12, 8 A M At this time, although not actually delirious, is unable to give a full and accurate account of his present attack Surface of body covered with petechiæ Gums red Tongue very red at tip and edges Body of tongue coated with light yellow fur Tenderness on pressure of epigastrium Conjunctiva of eyes injected Center of tongue cracked, with dark blood oozing from the denuded surface Conjunctiva of eyes and surface of body present a distinct yellow color Nausea, *pulse 110 respiration 22*, temperature of axilla 104 6 8 P M, pulse 113, respiration 26, temperature of axilla 105 5 The pulse has increased two beats the respiration four, and the temperature of the axilla, 0 9 F Has ejected the matters contained in the stomach, with some flakes and streaks of dark blood A small amount of urine was collected during the day which contained bile, albumin and urinary casts The urinary secretion is scant and evidently diminished in amount Injection of ice cold water into the rectum was ordered, ice bag to epigastrium, and water charged with carbonic acid, iced milk and fragments of ice internally

October 13, 8 A M pulse 110, respiration 29, temperature *104 5 Dull and* stupid Has thrown up black vomit in considerable quantity The injection of the ice cold water appeared to be beneficial and to increase the flow of urine 8 P M, pulse 112 respiration 34, temperature of axilla 104 7 Continue ice-cold injections to rectum and treatment October 14, 8 A M, pulse 116, respiration 35, temperature 103 3 Delirious jaundice, great capillary congestion, urine scant During the night the patient discharged black vomit over his bed and against the sides of the wall At the present time, spits up black vomit against the wall, like tobacco juice The black vomit appears to come up without any effort The nurse found it almost impossible to collect the black vomit for microscopic and chemic analysis No urine has been collected since the first day, although the nurse states that the patient has passed it in bed The injection of the rectum with cold water appeared to produce beneficial effects upon the congested and embarrassed kidneys 8 P M pulse 130, respiration 38 temperature of axilla 103 3 Great capillary congestion, conjunctiva and surface of a yellow mottled appearance Petechiæ have continued upon the surface Notwithstanding the increase in the rapidity of the pulse and respiration, the temperature has fallen 2 2 F since October 12 Died October 15 at 6 A M This patient was delirious for thirty-six hours before death

Autopsy three hours after death exterior of body of a golden jaundiced color, lower portions of a deep purplish mottled appearance Black vomit issuing from corners of mouth and streaming down the neck Limbs, trunk and face full and plump Blood issuing from both ears Thorax lower portions of lungs congested, otherwise normal Heart muscular fibers presented a yellow appearance and were much softer than in healthy hearts, and in the heart of malarial fever Under a magnifying power of 450 diameters the transverse striæ of the muscular fibers were found to be indistinct, and to be filled with granular matter and small oil globules The granular matter and small oil globules appeared to be deposited around as well as within the muscular fibrillæ The blood from the cavities of the heart was carefully collected, it was still warm, and fluid Upon standing a few minutes in the glass vessel it coagulated Under the microscope the vast majority of the colored blood corpuscles presented a normal appearance, a few presented a crenated stellate appearance The blood corpuscles ran together, forming rouleaux as in the blood of inflammation The fibrin was diminished in amount—the clot was voluminous and soft, but the fibrin was in larger amount, and the clot was more firm than in those cases in which there had been complete suppression of the urine Upon careful examination, with a high power, 1-18 of inch, I discovered no bacteria, animalculæ nor fungi in the blood The blood, however, contained numerous oil globules Reaction of blood neutral or very slightly alkalin Upon standing for a few hours, golden-colored serum was pressed out of the clot, which also contained colored corpuscles At the end of three days the clot still remained undissolved The serum was less deeply colored than in those cases in which there was complete suppression of urine The liver upon the exterior presented a yellowish mottled appearance This appearance was also observed when sections of the organ were made, and appeared to be due to the congestion of the hepatic capillaries within each lobule The periphery of each lobule, including the portal system of capillaries, was of the usual yellow color, and the oil appeared to be accumulated in largest amount in this portion of the lobuli Some portions of the liver were without any marked capillary congestion of the hepatic venous capillaries, and presented a uniform yellow appearance This liver in a general view, presented more nearly the Spanish brown color of the liver of health than in many cases of yellow fever, and this depth of color was due to two causes 1, to the great congestion of the central capillary (hepatic capillaries) of each lobulus, and 2, to the presence of dark granular masses of hematin, scattered chiefly through the portal system of capillaries, and which had evidently been deposited during the preceding attack of malarial fever The blood was much brighter in color in the *capillaries* of the liver than in malarial fever The blood from the cavities of the heart and from the blood vessels of the liver also changed to a bright arterial hue The voluntary muscles, as those of the thorax, presented a brilliant hue when exposed to the atmosphere The muscular fibers of the heart on the contrary presented a distinct yellow color like that of the liver The gall bladder was entirely empty, kidneys of a yellowish color and congested Sections of the kidneys with Valentin's knife were carefully examined with magnifying powers ranging from 1-2 to 1-18 inch objective The Malpighian corpuscles and tubuli *uriniferi* contained detached cells, oil globules and yellow granular matter These matters have accumulated to a much less extent, however, than in the kidneys of those cases of yellow fever in which there had been complete suppression of urine Urinary bladder distended with golden orange colored urine Specific gravity 1012, reaction acid, urine contained albumin in considerable amount with detached cells and casts, no grape sugar Alimentary canal, mucous membrane of stomach congested, with denuded patches, in which the ends of broken vessels filled with dark liquid blood were plainly seen, especially when low magnifying powers were employed The stomach contained eight fluid ounces of thick, grumous, almost black liquid blood or black vomit Under the microscope, the contents of the stomach contained numerous blood corpuscles variously altered in their forms, masses of hematin, mucus corpuscles, broken capillaries, detached epithelium from mucous membrane and granular casts of the glands of the mucous membrane of the stomach No animalculæ or vegetable organisms were observed in the black vomit Some oil globules were observed, which were referred to the milk which the patient had taken before death The black vomit emitted a foul putrid odor as of decomposed blood Reaction of black vomit slightly acid Spleen, enlarged, softened and exhibited the marks of preceding malarial fever

The foregoing investigations occupied my time fully for twelve hours without intermission I determined to institute a series of experiments with black vomit upon living animals, and at 6 P M , Oct 15, 1873, I instituted the following experiments

EXPERIMENTS UPON LIVING ANIMALS WITH THE BLOOD FROM THE HEART, AND THE BLACK VOMIT FROM THE STOMACH, OF YELLOW FEVER CASES

Experiment 305 —With a small "subcutaneous" syringe, I injected beneath the skin of a healthy puppy, about thirty drops of blood taken from the heart of a yellow fever patient three hours after death. No ill effects were observed

Experiment 306 —In like manner I injected beneath the skin of an active guinea pig about the same quantity of blood from the yellow fever heart The next day, Oct 16, 1873, the guinea pig appeared lively and ate its food October 17, the animal appears sluggish and refuses food October 18 animal feeble, moves with difficulty, and is evidently ill from the effects of the injection October 19, 5 A M , I found the guinea pig dead, cold and stiff

Post-mortem examination —Body emits a disagreeable odor, cellular tissue of skin and surface discolored and greatly congested around the point of the injection of the yellow fever blood Cellular tissue and skin softened in those portions around the area of injection Under the microscope the fluid from these portions of the cellular tissue was found to contain bacteria and revolving animalculæ Cavities of the heart distended with dark, almost black, loosely coagulated blood Blood changed rapidly to the arterial hue upon exposure to the atmosphere Under the microscope the blood corpuscles presented no peculiar alteration Liver congested The microscope revealed no accumulation of oil in the textures of the liver Liver cells distinct but pale No bacteria, or animal or vegetable organisms were observed in the blood of the heart, or in the blood and structures of the liver

Experiment 307 —Into the subcutaneous tissue of a large, healthy and active male guinea pig, I injected about thirty drops of black vomit, taken from the stomach of the yellow fever patient three hours after death The black vomit thus carefully injected into the cellular tissue caused the death of this animal in six hours

Post-mortem examination —Diffused redness, and great capillary congestion of cellular tissue beneath the skin Congestion greatest in the immediate vicinity of the injection Body emits a foul putrid odor Immediately around the point where the black vomit had been injected dark blood had been effused, and the textures presented precisely the appearance of those wounded and poisoned by the fangs of the rattlesnake or copperhead The cavities of the heart were distended with dark loosely coagulated blood No animalculæ, bacteria or fungi, or algæ discovere in the blood Decomposition rapid; and althoug the animal was examined almost immediately afte after death, the odor was disagreeable and resemble that of the black vomit

Experiment 308 —I injected into the subcutaneou tissue of a large healthy guinea pig, about thirt drops of black vomit which I had preserved from case of yellow fever, ejected shortly before death o Oct 9, 1873, six days before the present experimen Death caused by the black vomit in six hours

Post-mortem examination —Results similar in al respects to those recorded in the preceding exper ment, intense congestion of cellular tissue aroun locality of injection of black vomit, no animalcul or vegetable organisms in blood, putrefaction rap and marked by foul odor

Experiment 309 —I injected into the subcutaneou tissue of a guinea pig about thirty drops of putri blood, which I had extracted from the cavities of th heart of a subject who had died six days before, o October 9, in a "*congestive*" malarial chill Deat caused by the putrid malarial blood in eight hours

Post-mortem changes similar to those recorded i experiments third and fourth

The preceding experiments are of importance i establishing the fact that black vomit, taken fro the stomach immediately after death, or ejected du ing life in yellow fever, will, when injected into th subcutaneous tissue, produce as deadly and as rapidl fatal results as putrid blood

We deduce the following practical conclusions

1 Black vomit, when absorbed into the circulator system, may act as a deadly septic poison

2 As the capillaries of the stomach in yellow feve are often ruptured, and the epithelium of the mucou membrane denuded, it is possible that in some case the absorption of black vomit, especially after it ha undergone putrefactive changes in the stomach, ma be an important cause of the fatal issue

3 If remedies could be used which would preve putrefactive changes in the black vomit and render comparatively inert, a certain proportion of case might be rescued, after the appearance of blac vomit

The preceding experiments and reasoning led m to employ the sulpho carbolate of sodium, in dose of 20 grains, every four or six hours in the treatme of yellow fever I have used the sulpho-carbolate sodium in about forty cases of yellow fever, wit satisfactory results I find that it is readily borne b the stomach at all stages of the disease, that so f from exciting nausea or vomiting, it often modifi and arrests these distressing symptoms It appeare in some cases to arrest the decomposition of the blac vomit One case accompanied by a temperature 107 1 degrees, and attended with black vomit r covered under its use, combined with ice water inje tions into the rectum At some future time we ho to present statements of these cases

Davaine claims to have made the following disco eries after injecting beneath the skin of an an imal's neck a single drop of putrid blood, the su rounding tissue became extensively infiltrated, an death soon followed with symptoms of septicemi The blood of this animal was then employed to inje other animals in a similar way, and was found to b more poisonous than the original putrid blood third and fourth animal was then injected, each with the blood of the preceding one, and in this way twenty-four in all were experimented on The results seemed to show that the toxic power of the septic material increases by dilution

Stricker, in a series of experiments undertaken to test these statements, inoculated 25 animals with healthy, 23 with putrid, and 73 with blood diluted by transmission Of the first series, 4 died Of the second series 11 died In experiments with diluted blood, when it had passed through 13 different animals, 53 of the 73 died From this it appears that even the very small amount of 1-1250 of a cubic centimeter of poisonous material could cause death when injected hypodermically Davaine's statement that organisms form in the blood and increase by every transmission, was not sustained by investigation Stricker found numerous colorless bodies in the blood of these animals, but he did not regard them as organisms, but rather as protoplasmic bodies The following facts he regards as ascertained

1 That transmission greatly increases the injurious and fatal action of the putrid matter

2 That the original disease was infectious, but that through inoculation it became contagious

3 That though it be not proved yet it is probable that the special poison is a living contagion (*contagium animatum*) for such rapid proliferation is only possible in organized material

4 That the poison is diffusible and is not destroyed by boiling (*Allg Wein Med*, *Zietung*, 20, 1873, *New York Medical Record*, July 1, 1873, p 311)

If it be true that the poison of yellow fever may be generated in human beings under certain conditions of the constitution, and more especially of the chemical and physical constitution of the blood and of the nervous and muscular structures, when subjected to the combined influences of heat and crowding in an impure atmosphere, if it be still further true that decomposition, both before and after death, is more rapid than in any other form of disease, and if this decomposition forms the most favorable condition for the rapid multiplication of bacteria and fungi, and other simple organisms, it is reasonable, in the light of the preceding experiments of Davaine and Stricker, to suppose that these organisms may become *carriers* of the poison, and may constitute an important medium of its dissemination from the original foci

Magendie has shown by actual experiments on living animals that an excess of alkalinity in the blood, interferes not only with the freedom of the passage of this liquid through the capillary vessels and diminishes the property of coagulation, but also, when thus modified, the blood tends to penetrate the walls of the capillaries by imbibition, and to produce those disorders in the mucous membrane, which have long been known under the name of inflammation

Magendie by injecting carbonate of soda into the veins of animals, produced edema of the lungs, with its pathognomonic signs at the outset, and cadaveric lesions when it causes death Thus proving that when the blood becomes surcharged with an alkalin principle its serous matter increases in quantity, escapes from its vessels among the lobular ramifications of the lungs, distends and bursts them, and carrying with it the coagulable part, in a semi-liquid state, collects in irregular masses, which appear to be formed in large measure of fibrinate of soda and potassa

On comparing the disorders caused by spontaneous excess of alkalinity in the blood, with those produced by injecting carbonate of soda into the veins, or by a frequent repetition of blood-letting, Magendie found the same symptoms and similar results

If any substance possessing the property of combining chemically and of forming salts with the fibrin, such as fibrinate of soda, potassa, or ammonia, be injected into the veins of a living animal, the fibrin will lose its coagulability, and this change affects the blood generally, and although it may contain the usual proportion of fibrin, it becomes unfit for circulation, and stagnates in the capillaries and especially in the pulmonary vessels, and local lesions, as apoplexy, hemorrhage, or hepatization follow

Magendie has in like manner, tested the effects of defibrinization upon the process of inflammation during the reparation of wounds He selected a dog from whom he had successively removed several portions of fibrin A longitudinal incision was made through the skin, and some depth of muscle in the anterior and middle part of the neck The blood that escaped from the divided vessels appeared more liquid than usual, it did not coagulate on the blade of the bistoury The lips of the wound were united by the twisted suture, and the animal left to himself The animal survived the operation a few days only An examination of the wound after death revealed the absence of any real adhesion by coagulable lymph, and the divided tissues were discolored, dry and hardly at all swollen

The older writers were acquainted with the fact that alkalin salts prevented the coagulation of the blood, and John Huxham in his "Essay of Fevers," uses this fact to explain the changes of the blood in scurvy and putrid petechial fevers

> "It is well known that volatile alkali salts mixed with the blood when just drawn, or rather after it runs from the vein, keep it from coagulating and hinder it from separating into crasamentum and serum, as usual The experiment is easy, and every one will find it true on trial This very adequately resembles the blood drawn from the bleeding scorbutics and also from most persons that labor under putrid petechial fevers, when the blood is drawn very early *in the disease*
>
> 'All humors of the body, actually putrefied, become a strong alkali, and putrid blood loses its consistency, and soon after its color, running into a yellowish dark-colored sanies The blood drawn in some greatly putrid petechial fevers, hath had this appearance, and been observed actually to stink as soon as drawn, as well as the urine, as soon as made, so far was the putrefaction advanced, while even life was still subsiding The surprisingly great and speedy corruption of bodies dying of pestilential fevers with spots, shows this likewise, I have known such a corpse air as much, as they call it, in seven or eight hours, as dead bodies commonly do in seven or eight days, and to leak out a most putrid sanies, from all the outlets of the body, which by-the-by, is a reason why persons dying of such fevers should be buried very soon"—'An Essay on Fevers," etc, by John Huxham, M D, 1757, pp 50, 51

Andral has shown that in the diminution of the fibrin, relatively to the globules, we *must recognize* the grand condition of the blood favorable to the production of hemorrhages, and in his investigations he found the relations of these two factors so constant that he found it impossible not to regard the one as the cause of the other In scurvy the proportion of globules is natural, or varies within narrow limits, while the quantity of the fibrin is diminished, and its coagulative quality is at the same time altered, and this condition is most favorable to the production of repeated and profuse hemorrhages

The tendency of the formation of petechial and

1870, studying meanwhile ancient Inca civilization My collection of ceramics, dug up under my supervision from the *huacos*, was one of the most complete in Lima when I left the city My practice was very extensive among all classes of society and I must say that, at this moment, I do not recall having seen cases of leprosy among the Indians The cases I recollect having seen were among the negroes particularly and the white descendants of Europeans,[5] that is the Creoles Of course syphilis was, and is still common among the Indians Anciently, throughout America, it was for some reason unknown to me, regarded as a "sacred disease" I have not used the Quichua language for so many years that I have wellnigh forgotten it I do not remember if it contained a word for leprosy Professor Bandelier, who is now delving in the tombs of the ancient Peruvians has sent some of his finds to the Museum of Natural History in Central Park Among other things a curious skull, with a deep hollow, caused I should judge by syphilis, and a lot of curious jars, etc I have never heard that those affected with leprosy in Peru were kept apart from other people I suppose that the cases were too few to attract the attention of the authorities As to Yucatan, where I have resided during eleven years, mostly among the aborigines, I do not recollect having met with a single leprous case among them There were a few cases of syphilis, where they have had contact with the whites To-day the Indian population of Yucatan seems to be a particularly healthy vigorous race I have seen cases of leprosy, but they were confined to the Creoles Two of the principal families of Merida, the capital, are known to be leprous Juan Peon Contreras, a member of said families who generally intermarry among themselves, although very wealthy, was at one time director of the Yucatan Museum, and a disgusting object to look at, literally falling to pieces Still he was commingling with other people without hindrance Another such case I saw at the Island of Cozumel I repeat, the cases are rare I have no doubt that the disease was known in the country ages before the advent of the Spaniards The Maya word for leprosy is *naycan*, from the verb *nay*, to corrode, to eat up This is not a name of modern invention, it is found in the dictionaries and vocabularies of the language made by the Franciscans in the sixteenth century I have a small medical book written in Maya language by a native, one hundred years ago, but I do not find in it any mention of leprosy

"My study of the mural paintings in the funeral chamber of Prince Coh, at Chichen, also of the bas-reliefs that adorn the walls of the public monuments in that ancient city, proves to me that in remote ages the inhabitants of Yucatan, in fact of all Central America, had as close communication with those of all other civilized countries as they have to-day They had close relations with India and Indo-China, where they introduced their civilization, as I show in my book 'Queen Moo and the Egyptian Sphinx,' that will be given publicity in two or three months I discovered portraits of Carthagenians sculptured on the walls, representations of negroes from Africa, Mongolians from East Asia, Burmese from Indo-China, etc, painted and carved on pillars and walls In fact the Nagas, the serpent worshipers, who developed such high civilization in the south of India and the Indian peninsula were immigrants from *Pâtala* (America), who reached Asia in times anterior to the invasion of India by the Aryans

"I do not suppose that sailors in those times were more careful than sailors in our days, and I have no doubt that they spread diseases among the inhabitants of the countries they visited, just as the crews of Captain Cook spread syphilis among those of the islands in the Pacific The communication between Asia and America being then frequent there can be no doubt that such contagious diseases as syphilis and leprosy were disseminated throughout the earth's inhabitants as they are to-day, and it seems to me impossible to determine where such a peculiar disease originated We know that at one time syphilis was as common in America, as leprosy in East India, and it is most probable that the inhabitants of these countries interchanged compliments, those of America introducing syphilis into Asia, those of Asia importing leprosy in America"

Diego de Landa, in a manuscript written in 1566 and entitled "*Relaccon de las Cosas de Yucatan*," in a chapter entitled, "*Varias Calamidades esperimentadas en Yucatan encl siglo anterior á la conquista, hurracan, pestilencias guerras*, etc" says, that "those who escaped took heart of grace to build houses, and cultivated the land, and multiplied themselves, being much aided by fifteen years of good and healthy weather, and that the last year was the most fertile of all, as they began to reap their harvest there broke out in the whole country some pestilential fevers, which lasted twenty-four hours After these diseases abated, there came a stream of gnats From this pestilence many people died, and a great part of the harvest remained ungathered These miseries were succeeded by a pestilence of large pimples which rotted the body with great stench, so that their limbs fell off in four or five days"

This is the only passage of the "*Relaccon*" which mentions anything having the least resemblance to leprosy There is falling off of the limbs, but they fall off in four or five days, and it is almost evident that the rottenness belonged to the soft tissues, and not to the bone It may have been smallpox

In Cogolludo's "*Historia de Yucatan*" (Diego Lopez Cogolludo, Madrid, 1688) where he gives a description of all the calamities, diseases especially, which afflicted the peninsula, there is not one line that can be interpreted as a reference to leprosy

NOTE—*Milagrosa, que no fe, sabe su origen, etc* Miracles of all kinds due to an image of the Holy Mother Cures an apostema on the sole of the foot, a tumor in the face, and in the throat Fevers of every description cured Sick stomachs cured by the Holy Image, etc—(Lib xii, Cap xix)

De otros milagros—An Indian woman, having given birth to a child, could not for a whole hour eject the natural superfluity, etc Another feels sudden pains in the stomach, etc Another woman feels a pain in the temples, which extends presently to the whole face, Holy Image brought, and patient cured Fever of a youth cured Other fever During five months a boy 14 years old had had fever, and after a while his face and his legs swelled Cured—(Lib xii, Cap xx)

The conquerors and original colonists seeing the continual sufferings from diseases, of the poor, strangers as well as aboriginals, founded a hospital, which has now existed for eighty years and more, at the date of this writing How they founded it, the King being patron, how it was administered at the expense of the city and intrusted to the monks of St Juan de Dios, is stated in this book, etc—(Lib i, Cap xiv, p 216)

Death of Landa The time came which the Divine Majesty had appointed for giving to the blessed Bishop Don Fr Diego de Landa, the reward which his many services and virtues merited, he died in consequence of a bad cold which he took while preaching on the passion and death of Christ He became feverish, and felt a puncture in the side He sent for counsel to our hospital and our physician considering the pain accompanying the fever, judged that it was a pain of the side and bled him The Bishop said at once that he believed himself to be dying and prepared for his last hour Lot of absurd details —(Lib vi, Cap xviii)

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[5] They suffered from elephantiasis

Enfermedad peligrosa en Merida, ano de 1609, etc —In that same year 1609, in the month of September, the inhabitants of Merida were much troubled by a disease, the Spaniards had had little experience of it in this country, and it was very dangerous It consisted in hot fever with measles and pustules Processions resorted to At the end of that year the disease passed away —(Lib ix, Cap i)

Don Gaspar Nunez de Leon mourat de melarchia, a word which is not in the dictionary, and has some relation with honey —(Lib xii, Cap i)

Milagro Notibilissime con unos Indios, etc The miracles with Indians is this, in two words they were deeply buried while digging, and by the intercession of San Diego, dug out again (No leprosy) Divers other accidents are reported There was also a dying priest whom prayers recalled to life —(Lib xii, Cap x, p 709)

Desgracios procedentes a la peste, etc A number of ships taken and burned at sea In June the pestilence began in Campeche, and soon the city was said to be entirely deserted Orations, processions, etc At the end of July the disease began in Merida where many persons perished in a few days (No leprosy)—(Lib xii, Cap xii)

Varios accidentes con que morian los enfermos, etc Symptoms—Various accidents Terrible headache and pains in all the bones, which seemed to go to pieces, or to be pressed as in a vise After a short time violent fever sometimes, but not always with delirium *Vomissements de sang corrompa*, and after this symptom few recovered, others had a flux of the belly, of choleraic humors (Yellow fever?)—(Lib xii, Cap xiv)

De algunos senalados religiosos que, etc Some distinguished ecclesiastics who died of the pestilence One mounts into the pulpit all right, and comes down with the symptoms of pestilence Dies the eighth day Another is infected while taking care of the sick Other cases of the same kind (Yellow fever?)—(Lib xii, Cap xv)

(*To be continued*)

SOCIETY PROCEEDINGS

National Association of Railway Surgeons

Abstract of the Proceedings of the Eighth Annual Meeting, held in Chicago, Ill, May 1, 2 and 3, 1895

First Day—Morning Session

The Association convened in the hall of the Young Men's Christian Association, and was called together by the Chairman of the Committee of Arrangements, Dr A I Bouffleur, of Chicago

Prayer was offered by Rev Dr Thomas

Dr Bouffleur introduced Hon A F Walker, of Chicago, who delivered an "Address of Welcome" Dr W B Outten of St Louis, responded on behalf of the Association

President Thorn was then introduced by Dr Bouffleur, and delivered the

PRESIDENTIAL ADDRESS,

In which he reviewed the foundation and growth of the Association, which in 1888 had 181 members, and now has over 1800 A tender tribute was paid to the late Dr A W Ridenour, of Massillon, Ohio, the inspirer and progenitor of the Association

The reports of the Secretary and Treasurer were then read, and on motion, adopted

Dr Wooster, of Grand Rapids, Mich, offered a resolution pledging support to *The Railway Surgeon*

On motion, the Association adjourned till 2 P M

First Day—Afternoon Session

After some routine business was transacted, the reading of papers was proceeded with

Dr J B Murdoch, of Pittsburg, Pa, read a paper entitled

AMPUTATIONS CONSECUTIVE TO TRAUMATISMS

In brief, Dr Murdoch said Amputations are performed consecutive to traumatisms for the following reasons

1 To save life, because of the fact that nature, unassisted, would succumb before the patient could recover from the injury, and 2, because the limb has been so destroyed by the injury that nature, even when assisted, is unable to restore it sufficiently so as to be useful to its possessor

When should amputation be performed? The answer to this question is plain If the amputation is inevitable it should be done at the time when it can be done with the least risk to life

In coming to a conclusion whether we shall amputate or not, we must consider the age of the patient, his habits, the condition of his health, his environment, and the care he will receive while under treatment We must also consider whether, in case the limb can be restored, it will be more useful and less painful than a mechanical appliance When the surgeon is in doubt he should give the patient the benefit of it and withhold the knife

A spirited discussion followed this paper, in which Drs Thos H Manley, W P King, Emory Lanphear, W B Outten, E W Lee, P H Hoy and J L Eddy participated

Dr John E Sylvester of McArthur, Ohio, narrated an interesting case of bloodless amputation at the *hip joint*, the patient being a 10-year old boy who took 164 grains of morphia in twenty four hours, and is to day alive and well

Dr W H Buechner, of Cleveland, Ohio, contributed a paper on 'Pirogoff's Amputation," strongly favoring it

'Silicate of Soda in Surgical Dressings," was the subject discussed by Dr S R Wooster, of Grand Rapids, Mich, in which he highly recommended it in preference to other material

A paper by Dr Thomas H Manley, of New York, was read by title, at the request of the author It was entitled "Traumatic Arthroses"

The Association, on motion, then adjourned till 9 A M, Thursday

Second Day—Morning Session

Dr B Merrill Ricketts, of Cincinnati, Ohio, read a paper entitled

EMERGENCY SURGERY IN THE ABDOMINAL CAVITY

Pain is not always indicative of a large amount of exudation

The presence of a large amount of fluid is not always *accompanied by a rise in temperature*

There is no means of determining the character of the fluid without exploration

The use of an exploring needle is the only means of positively determining the presence of fluid

The temperature is sometimes subnormal

The fluid should not be allowed to reach above normal in quantity

It should be removed as often as necessary to keep it within the normal amount

Open drainage should be made in all cases of tubercular fluid, even though it be within the spinal canal, by means of the lumbar puncture

Surgical anesthesia is not necessary in case of cerebral meningitis

The probabilities are that the irrigation of serous cavities by some pus destroyer may aid much in effecting a permanent cure

Narcotics in any form are contra-indicated, absorption is less likely to occur with than without them

Antithecine may prove itself one of the most valuable means in treating tubercular serous cavities without mixed infection

Hon R C Bell, of Fort Wayne, Ind, was then introduced, and addressed the Association on the subject of

AN EXPERT WITNESS

In beginning his address Mr Bell said

I am not presumptuous enough to think for a moment that I can instruct you in any of your duties as expert witnesses Railway surgeons are very frequently called to the stand to testify, growing out of their employment by railroads It must be so, and railways must employ surgeons There are several reasons, a few of which I will mention First, it is the requirement and dictate of humanity As long as railways are operated, as long as we are to fly, as it were, upon wings from one side of the continent to the other, day and night accidents will occur Human suffering follows and that suffering must be alleviated by the best means that are attainable

When you are called to the stand as expert witnesses you are placed in an exceedingly delicate position You are known to be in the employment of a railway company, and they ignore too often the fact that you are not employed as witnesses You have been employed for other services But you are required to give your opinion upon subjects in a manner which may militate for or against the respective litigants I wish to add my testimony to the fact that after an experience of a quarter of a century I can not recall a single instance when the honest judgment and opinion of its railway surgeon has swerved a hair's breadth because of his employment by a railway company I was witness as a lawyer to the fact of the elevation of the standard of experts and their testimony by the system of medical ethics that has been adopted and become general throughout our country Railway surgeons because of their employment are not expected to become claim adjusters or detectives for railway companies And nothing can be more embarrassing to a railway attorney in trying a case than to find the attending railway surgeon has made himself a partisan on the company's side

Let me give you a little pointer Don't know too much It is the way to avoid a good deal of trouble on the witness stand A man can tell what he knows, but, in the language of the old schoolmaster, "It is exceedingly difficult for an individual to communicate to others that which he does not himself possess"

Dr Milton Jay, of Chicago, followed with a paper entitled "Thoracic and Pulmonary Injuries"

Dr Arthur D Bevan, of Chicago, read a paper entitled

REAL AND ALLEGED INJURIES OF THE SPINE,

which was freely discussed The more important points made by Dr Bevan were

The subject of injuries of the spine has received in the last thirty years more attention from medico-legal experts than possibly any other subject

Real injuries of the spine present positive and immediate symptoms

Alleged injuries of the spinal cord without positive and immediate evidence of gross lesion are either cases of malingering or abnormal cerebral conditions, psychoses, or a combination of the two

These psychoses are the results of two factors first, a brain readily affected by suggestion, or, second, suggestions furnished by an accident with or without injury to the individual, or by suggestions furnished by the hope of pecuniary gain, and lastly, and of greater importance, suggestions furnished by medical attendants

These cases all recover when the exciting causes are removed, rapidly under proper surroundings and advice, but recovery may be indefinitely postponed by improper surroundings and improper advice

These psychoses will not receive their proper medico-legal position until the medical profession has been generally educated in the subject, and until legal means are provided for the punishment of malingerers and their alleged medico-legal experts

In the afternoon the Association attended a surgical clinic given by Dr N Senn in the upper amphitheater of Rush Medical College Dr Senn showed several cases upon which he had previously operated, and also operated on several

Third Day—Morning Session

Dr W B Outten, of St Louis, read the report of the Committee on Necrology, which, on motion, was referred for publication

The election of officers was proceeded with, the result being as follows

President—Dr J B Murphy, of Chicago

Secretary—Dr D Emmet Welch, of Grand Rapids, Mich

Treasurer—Dr E R Lewis, Kansas City, Mo

Vice-Presidents—Drs W B Rogers, of Memphis, A D Bevan, Chicago, E F Beasley, Lafayette, Ind, H Logan, The Dells, Ore, Geo Graves, Herkimer, N Y, P F Vasserling, St Louis, Mo, A C Scott, Temple, Texas

Executive Committee—Drs S S Thorn, Toledo, Ohio, J A Barr, McKee's Rock, Pa, A I Bouffleur, Chicago

Assistant Secretary—Dr S P Wooster, Grand Rapids, Mich

Chairman Committee of Arrangements—Dr B M Ricketts, of Cincinnati, Ohio

Chairman of Committee on Transportation—Dr W B Outten, of St Louis, Mo

Place of next meeting—Cincinnati, Ohio

Following the election of officers, the reading of papers was again taken up

Dr W R Hamilton, of Pittsburg, read a paper entitled "Syme's Amputation"

Dr C D Wescott, of Chicago, read a paper entitled

THE EYE IN RAILWAY SURGERY

He said An injury to the eye is the most common accident in the whole list Hot cinders and molten metal frequently burn quite deeply into the conjunctiva After they have been removed under cocain and thoroughly cleaned with a bland antiseptic, a small quantity of sterilized vaselin or olive oil dropped into the eye is very soothing and grateful It is usually best not to bandage an eye thus injured, but the lid should be frequently bathed with warm borax water and the eye flushed with a saturated solution of boracic acid every three hours Cocain should not be prescribed as an anodyne Iced compresses will usually relieve the pain if so applied when the pain is continuous In our shops and factories all over the world employes are *daily jabbing* at the cornea with sharpened sticks, pocket knives, horseshoe nails, and other *improvised instruments*, in attempting to remove pieces of stone, steel, emery, etc, which are innocent as compared with the *instruments and methods* employed If these offending particles are not deeply imbedded in the cornea *they may usually be removed without* the slightest trouble by simply wiping them away with a little swab made by *twisting some cotton on the end of a toothpick* or something like it

IS THERE ANY SPECIAL FORM OF DISEASE PECULIAR TO THE RAILWAY SERVICE?

This paper was read by Dr Outten, of St Louis His remarks were founded on the cases occurring in the past eight years among the employes of the Missouri Pacific Railway system Dr Outten said in substance It may be a surprising fact to some that the most sickness comparatively, exists among the section hands, and the next highest is the clerical force A compilation shows the proportion of illness in different occupations as follows Section men, 28,687, clerks, 16,269, engineers, 6,369, firemen, 8,024, brakemen, 11,390 In proportion to their number the most healthy classes are the engineers and brakemen An analysis of 170,570 cases treated in the hospitals of the Missouri Pacific system shows that 64 per cent of the total number of cases were rectal diseases This certainly proves that rectal disease is peculiar to the railway service and due to the enforced irregular habits of railway employes Other statistics gleaned from the reports show diseases ranking next highest are malarial fever, rheumatism, lumbago, diseases of the respiratory and digestive organs, and nervous diseases I want to especially mention the fact that in over 170,000 cases among our employes only thirty-five were to be classed under the head of alcoholism

Dr J A Barr, of McKees Rock, Pa, read a paper entitled

THE CARE OF THE INJURED FROM THE PLACE WHERE INJURED TO THE HOME OR THE HOSPITAL

He said The first step in the care of the injured should be taken by the railway company in the providing every engine with a box containing a rubber compress, absorbent cotton, bandages, etc, with instructions how to use in case of accident until the surgeon arrives, with caution against the too free use of stimulants in the shape of whiskies, wines and brandies, for we have seen much harm result from their use by persons not knowing the true nature of the injury also caution against the use of dirty waste, dirty handkerchiefs, black oil and other lubricants being applied to the wounds, for we take it that every railroad injury, from the very nature of the case, is septic, and these things only add fuel to the fire The surgeon should keep on hand at all times an emergency bag containing anesthetics, antiseptic dressings, bandages, tourniquet, stimulants, and instruments for all emergencies When an injured person is liable to be some time in transit, the wound should be thoroughly cleansed by washing it in hot water, carbolized water, or better still, a solution of antipyrin For the relief of pain morphin, administered hypodermically, and cocain, applied locally, are the best remedies When there is shock get the patient away from the crowd, cover him with blankets, and use in addition hot water bottles, hot irons or anything else that can be had, placing them under the body, but taking care not to burn an unconscious patient Then give stimulants of alcohol in small, oft repeated doses In cases of severe burns or scalds apply common baking powder, mixed with water to the consistency of cream to the burnt surface Another very good thing is simple petroleum spread thickly on cotton, cotton batten or old linen and applied to the surface To transport a patient place him on a cushion, cover him with clothing or anything to keep him warm, place him on the floor of the car with the head toward the front end of the train, guard against draughts of air, and observe the caution against the too free use of stimulants

Hon Clark Bell, of New York, spoke briefly on the topic

PERSONAL EXAMINATION OF PLAINTIFF IN PERSONAL INJURY CASES

He stated that after a long legal strife it was now the law in all States that a plaintiff in a suit for damages for personal injury must submit to an order of the court to a personal examination by experts as to the real nature and extent of the injuries He urged the Association to labor for the adoption of similar laws in every State the law to contain provisions in cases where the plaintiff is a woman

COLOR PERCEPTION IN RAILWAY EMPLOYES—DO THE ACCEPTED METHODS OF TESTING MEET THE REQUIREMENTS?

Was the subject discussed by Dr Le Roy Dibble, of Kansas City He said Gross injustice has been done many faithful employes by Holmgran's tests I think we should pay more attention to a man's mental acuteness than to the acuteness of his vision and color sense, or the cast-iron rules laid down for our guidance I do not believe it is the intention of the manngers of our roads to do any man injustice, but the oculists employed should be men of wide experience, and if they find a man deficient in color sense and yet by actual practical test, he can overcome this defect, he should be retained It is impossible to measure one man's capacity by another's, mentally or physically Our rules smack too much of trades unionism, i e, measuring every man's capacity not by the highest standards but by the lowest, a common dead level of mediocrity They should not be like a chain, just as strong as the weakest link, but be put on the basis of common sense, experience and mental capacity of the individual

Dr Outten indorsed the views of Dr Dibble

Dr C H Williams, of Chicago showed the tests used in examining employes of the Chicago, Burlington & Quincy Railroad

Some unfinished routine business was then taken up and disposed of quickly, after which the newly elected President, Dr Murphy, was installed

Several papers on the program were read by title in the absence of the authors, and owing to lack of time

It was ordered that no abstract or report of the proceedings should appear in any medical journal except the *Railway Surgeon*, as the doors had not been closed, the Journal takes pleasure in rescuing from oblivion the very excellent papers that otherwise would have been buried in the pages of an exclusive periodical

On motion, the Association adjourned to hold its next meeting in Cincinnati, Ohio

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American Electro-Therapeutic Association

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept 25, 26, and 27, 1894

William J Herdman, M D, President

(*Continued from page 682*)

Monsieur Gautier's paper was read by Dr A Lapthorn Smith

ELECTROLYSIS IN URETHRAL STRICTURE—A NEW ELECTRODE

BY GEORGE GAUTIER, M D, PARIS, FRANCE

Rigid electrodes with long and thread like conductor are generally difficult to handle and dangerous for reaching urethral strictures They get spoiled at each application and are very expensive For a year past I have employed a new instrument that will supplant them with advantage in all cases and which is easy and harmless to apply This instrument is composed of a urethral bougie made of gum, the diameter of which varies with the cases to be treated, because we can have them made of all shapes in order to treat accessible strictures, those of the esophagus, urethra, lacrymal canal or rectum This bougie is cut off at 6 centimeters from its conical end and a platinum tip is screwed on to it 1½ centimeters in length and of the same diameter as the bougie This metal end is connected with the negative pole of the battery by a flexible wire which is fixed in the bougie during its manufacture The introduction of the electrode is easy and made without violence or pain, it follows all the curves of the canal, does not irritate, and permits us to make a slow gradual dilatation which by degrees changes and modifies the nutrition of the parts and surely saves the patient from false passages, retention, and ruptures of the urethra

The mode of operating 1, find out beforehand with the measuring bougie the situation of the stricture, its nature and especially its caliber, 2, inject into the bladder half a pint or more of boracic acid solution, 3, make use of an electrode of the same diameter as the exploring bougie

Duration, intensity and nature of the operation The electrode is connected with the negative pole of the battery, the positive pole being attached to a belt 18 centimeters long by 12 wide, covered with amedo or chamois skin, and which is applied to the abdomen or thigh At the moment when the metallic end of the bougie reaches the strictured part of the urethra we turn on the current until 10, 15 or 20 milliampères at the most are reached At this moment we push in the instrument without any violence until it reaches the bladder If the stricture is long and hard, it requires ten minutes or a quarter of an hour with an intensity of 12 or 15 milliampères If the strictures are short and are of unequal dimensions it will be necessary first to treat the longest strictures and to put off for a week the treatment of the other ones Before withdrawing the electrode we turn off the current and the patient empties his bladder thus securing the antisepsis of the latter It is not advisable to employ too large a bougie at first, but the next day and each day following to introduce a catheter, which will also serve to fill the bladder with boracic acid solution

A second and even a third electrolytic application will be necessary if the strictures are near together and numerous, because with the electrode the dilatation is gradual We should always allow an interval of ten days to elapse between each application

Results I have by this means treated six urethral strictures, the results were in the six cases excellent I did not notice any complication I can not say that the cures are definite, because they are of too recent date, but I recommend this proceeding to my brethren, because of its efficacy, its painlessness and harmlessness

Margaret A Cleaves, M D, New York City, read the following paper

A MEANS OF CONTROLLING AND REGULATING THE STATIC INDUCED CURRENT

The so-called "static induced," whether developed from a frictional or an influence machine, is a current of an alternating discontinuity, whereby currents of alternating directions commence and cease intermittently[1]

It is characterized by a series of oscillations, and these may vary, according to the size of the condenser from a minimum of less than 1,000 periods per second (or within the limits of audition) to 1,000 000 or more periods per second

The therapeutic value of this current is thoroughly recognized, but the difficulty of controlling and regulating it has no doubt militated against its usefulness In fact the only method of control heretofore in use has been that of separating the discharging rods as slowly and gently as possible This has effected an adjustment of the frequency, but has not provided for the regulation of the other important factor, namely the quantity or amperage which might be desired with a given number of periods

When this separation is performed with the greatest care it is still impossible to do away entirely with sudden shocks and jars which are painful to all in varying degrees but especially to nervous sensitive patients

A certain amount of experimental work in conditions where a profound massage effect was desired, especially in pelvic conditions, convinced me that to obtain its full measure of usefulness and thus to insure its highest therapeutic success, it was necessary to be able to regulate and control the volume or amperage of this current with the same nicety that is possible with the constant, induced or sinusoidal current

Despite the difficulty encountered in securing this control of the static induced on account of its immense E M F the writer undertook in the early part of 1894 to make some experiments with various patterns of water rheostats to see if by any possibility a regulator could be constructed on this principle through which this current could be passed without the danger of spark leakage The first experiments were made with the Bailey water rheostat, and I found that so long as I kept my spark gap as short as the distance between the two milled screw heads, I could perfectly control it

The same thing was proved with other water rheostats, and the fact established that all that was necessary was to keep conducting material at the maximum sparking distance apart

Finally, the instrument shown in the cut was constructed for me by the Galvano Faradic Mf'g Co, of New York City

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[1] Professor Houston

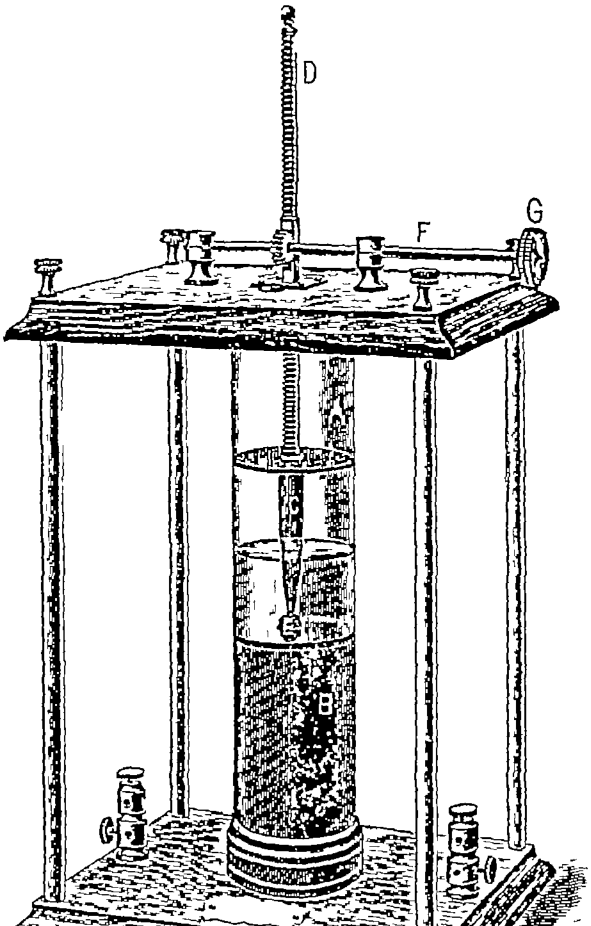
Inclosed in the glass tube *A* is a cup of pure carbon *B* This cup is secured at the bottom and forms one of the terminals, the other terminal a tapering carbon rod *C* fastened to a metal rod *D* and wrapped with a sponge at the apex *E*

On the top of the rheostat connected with a coarse double thread screw (a continuation of the metallic rod *D*) is a metal bar *F*, ending in a large milled screw head *G* By turning this screw head the carbon point is raised and lowered at will

The glass is filled with water until it touches the sponge on the end of the carbon rod

The rheostat is wired on the principle of a shunt circuit and has double binding posts, one to receive the wires from the Leyden jars, the other for the conducting cords distributed to the patient

The rheostat may be connected directly with the machine in the room in which it is placed, or heavy well insulated wires may be connected with the static induced binding posts and carried through apertures in the wall to an appropriate place at a distance, keeping them at all times the maximum sparking distance apart It may then be placed at a convenient point for daily use, by the right hand of one's operating table, for instance, and connections made in that position with the wires from the machine



It is possible to use it with any size of the Leyden jars and a spark gap of from one to four or five inches The latter is only desirable with the smallest jars, but with the longer spark gap the current loses the rapidity of its oscillations but gains in E M F

When the rheostat is permanently connected with the machine, as I have indicated, the first thing to do is to arrange the spark gap of the size desired and set the machine in motion, then connect the conducting cords from the rheostat to the electrodes through which the current is delivered to the patient When all the connections are made for the administration of treatment, the tapering carbon fastened to the metal rod is gradually raised by turning the screw until the current strength desired for the particular application is reached This can be done to such an extent as to produce the most violent muscular contractions without the patient suffering from any pain, jars or shocks With appropriate connections every voluntary muscle of the body can be put into a state of activity, with the exception of a few muscles of the head and face, and the temperature raised from a fraction of a degree to 2 degrees It accomplishes, in common with the usual administration by means of sparks, a marked nutritional gain By its use all metabolic processes are encouraged In vagino-abdominal applications, patients speak of the effect as much more pronounced than from either the induced or sinusoidal currents, an effect which they characterize as a feeling of lightness and buoyancy in the pelvis with an ability to walk with greater ease It is not well borne in subacute inflammatory conditions of the pelvic organs Patients with such trouble are prone to have recurrence of pain and soreness, save with the mildest applications

The current best adapted to the treatment of pelvic conditions where relief from pain is desired as well as relief from congestion, is obtained by using the large or medium jars standardizing the frequency by a very small spark gap, say from one-eighth to one-half of an inch, and gradually turning on the whole available current strength by adjusting the controller Where profound massage effect is desired, as in prolapsus uteri or relaxed vaginal walls, a longer spark with its greater E M F but with less rapid oscillations is of greater value, and for such uses no other current can take its place By means of this instrument when once the spark gap is arranged, the machine in motion and the patient in circuit, the operator is able to make any application, general intra-uterine, intra-vaginal, intra-nasal, to the eye or the ear and so perfectly regulate the current as to make the treatment absolutely painless

As a result of the physical peculiarities of the static induced, it is impossible to place a resistance in the circuit without damping the oscillations This damping out effect I can readily appreciate both by ear and touch, but as I am in the habit of increasing the number of revolutions of my machine under these circumstances I am able to compensate for any such loss and maintain sufficiently rapid oscillations, and thus secure the same clinical effect as when there is no rheostat in circuit

The form of the rheostat is not a new one but an adaptation from a constant current controller already on the market The features of originality to which the writer lays claim are the conception of the idea of regulating the current strength of the static induced without varying (in any practical degree) the frequency of the oscillations and the peculiar form of rheostat by which that idea is reduced to practice This rheostat was shown at the New York Electro-Therapeutic Society last April, and has been used by the writer ever since with perfect satisfaction

68 Madison Avenue

The Influence of the Nervous System on Absorption —(Leubuscher and Tecklenburg, *Virchow's Archiv* Bd, cxxxviii, Hft 2) The writers publish in brief the results of fresh experiments and of new trials of older ones, which appeared in detail in Tecklenburg's inaugural dissertation, Jena, 1894 These results are as follows

1 Goltz' opinion, that after destruction of brain and spinal cord the vascular tonicity is increased, so that a frog loses only a few drops of blood from the opened aorta, is insufficient to account for his observation on the loss of blood in the operation

2 A short time after severing the nerves of one extremity there was seen in that extremity, a dilatation of the vessels, slowing of the blood current and, as a consequence, delayed absorption This disturbance was compensated after a short time

3 and 4 If coils of empty intestines are exposed and the corresponding nerves in the mesentery are severed, fluid collects within the coils, pale and clear, alkalin, unaffected by heat, and acting in no way upon albumin or starch The fluid must therefore be a transudation from the blood, not a secretion from the intestinal mucous membrane Half as much iodid of potash (in solution) is absorbed from the intestinal coil whose nerve supply is cut off, as from a coil of equal length with full nerve connection In the jejunum more is absorbed than in the ileum

5 Dogs in whom the large abdominal ganglia were extirpated, showed after the operation depression, diarrhea, and later, despite feeding, an emaciation which was overcome slowly, seven to eight weeks after the operation The urine meanwhile showed an acid reaction, as in starvation of herbivora Sugar was never found, traces of albumin often, small quantities of blood rarely —*Centralblatt für innere Medicin*

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SATURDAY MAY 11, 1895

FOUR "SLUM" CENTERS

The four American cities—New York, Chicago, Philadelphia and Baltimore—have been made the subject of a voluminous report regarding their "slums,' or as DR ELISHA HARRIS was wont to style them, "les pauvres faubourgs," by the HON CARROLL D WRIGHT, Commissioner of Labor The report is a provisional one and is addressed to the President The funds set apart for this work amounted to $20,000 and were wholly inadequate to an exhaustive collection of the facts, so that the centers of the fields, only, were undertaken to be covered

The report is a book of 620 pages, the larger proportion of which is full of tables conveying finely comminuted tabulated information as to age-periods of inhabitants, nativity and parentage, size of families, illiteracy, occupations and weekly earnings, school attendance, condition of children, condition of married women having specified number of living children, numbers of families and individuals in tenements, the health of people living in the slums, sanitary condition of tenements About one-seventh part of the total estimated slum population of the four cities, or 582,000 was reached, namely, 83,852 souls are comprised in DR WRIGHT's report

The slum population is largely foreign-born, in New York it is more than 62 per cent, in Chicago it is 57 per cent, in Philadelphia it is 60 per cent, but in Baltimore it is not above 40 per cent However, if we look at the total foreign populations of the cities, we find that the foreign-born population of Baltimore is 15 88 per cent, in the slums it is 40 2, of Chicago 40 98, in the slums 57 51, in New York City 42 23, in her slums 62 58, in Philadelphia 25 75, in her slums 60 4 Of the nationalities tending to these slums, the Italians predominate in Chicago, New York and Philadelphia, while in Baltimore Germans give the largest percentage, Russians and Polacks come second in Philadelphia and Baltimore The Irish and Poles are second in New York, while Austro-Hungary and Russia are second in Chicago

As DR PORTUGALOFF has expressed his views of rapid up rising of the land of PETER THE GREAT, when he says "Not many centuries ago a great desert stretched where now is Russia and where now a smell is of myriads of pinched bed-bugs is spread all over Eastern Europe," so do Russia and Italy and Poland send to our cities their unclean slum majorities with odorous qualities and difficult sanitary problems

The percentage of illiteracy is much higher in the slums than in the cities at large, and in all cases the higher percentage of illiterates is among the foreign-born The range of illiteracy is expressed by 47 per cent in New York (the highest) and 20 per cent in Baltimore, where it was the lowest, Philadelphia had 37 and Chicago 47 per cent

The health of the slum-dwellers was found to be better than was to be expected This important branch of the inquiry was confided to DR ALFRED S HOUGHTON, of New York City The reports of the experts and agents employed for this inquiry are nearly unanimous in showing small proportional sickness in the slum centers

It should be stated that the canvass was made in the most thorough manner—just as if a Federal census were in progress—each house and every floor being visited and the inquiry conducted in respect of each person therein dwelling The schedules show that no more sickness prevailed in the slums than in other parts of the respective cities While in some of the districts there were found abjectly wretched conditions of the domicile, the small number of cases of sickness was a distinct surprise to the canvassers The canvass was made in the spring of the year, the windows were everywhere open and the air of the apartments was, far less foul than in the winter season

Then, too, in all of these cities, the families are too poor to long retain their sick members, if there are hospital accommodations available In nearly all these cities there are hospitals for general and for specialized diseases, so that if a worthy tenement-house dweller falls sick there is commonly a hospital bed waiting for him somewhere

$O_2\ N_2\ A_1$

It is no longer correct to represent the chemic composition of the atmosphere by the familiar symbols $O_2\ N_2$—argon, the new element, must be taken into the account, and the formula now is $O_2\ N_2\ A_1$

This era-marking discovery by LORD RAYLEIGH and PROFESSOR RAMSEY, which was fully described in the

Journal of Sept 1, 1894,[1] is the scientific sensation of the day, and although if the Hodgkins fund prize has been awarded to the discoverers, it has escaped observation, they continue to be the recipients of the highest tokens of recognition by learned bodies everywhere Among the most recent of these tributes is the award to Lord Rayleigh of the Faraday gold medal by the Chemical Society of London, and of the Leblanc medal to Professor Ramsey by the Société Chimique de Paris, while it is just announced that "on the recommendation of the National Academy of Science the trustees have voted to make the first award of the Barnard medal for the most important discovery in physical or astronomical science to Lord Rayleigh, the discoverer of argon, a constituent of the atmosphere"

In searching for argon in other compounds, Professor Ramsey unearthed the fact that an American had barely missed anticipating himself and Lord Rayleigh In Bulletin No 78 of the U S Geological Survey (1892) is a paper by Mr W F Hillebrand "On the Occurrence of Nitrogen in Uranimite," in which is detailed the process by which the investigator had produced a gas whose properties, as described in the paper, leave little room for doubt that it was argon, in combination, as now known, with helium From the hints in Mr Hillebrand's paper Professor Ramsey selected cleveite, one of the uranimite group, and there found the object of his search This discovery is of only less interest than that of argon itself, for helium is but little known on account of its supposed rarity

Professor Berthelot, of the Paris Chemical Society, has also been experimenting with the new gas, and claims to have succeeded where Lord Rayleigh has heretofore failed—that is, in effecting a chemic combination of argon In the course of his experiments to this end, he obtained spectroscopic effects which incline him to believe that the aurora borealis is caused by the action of electric currents on argon and other elements in our atmosphere—hereafter to be indicated by the symbols O_2 N_2 A_1

FOR REVENUE ONLY

The suggestion in the Journal editorial of last week,[1] that the bias of the Report of the Royal Opium Commission was dictated by commercial considerations, receives support from other sources That exceedingly well-informed journal, the New York *Sun*, says that "East Indian business interests of all kinds must be vastly relieved at the tenor of the British Royal Commission's report on the opium question That Commission was appointed in the autumn of 1893 to consider the evils of opium eating and the financial difficulties that would be involved should the traffic be abolished by law"

The Commission has found no evils from the "temperate use of opium in India"—on the contrary, such use may be "even beneficial," as it argues from the fact that "the opium habit prevails among some of the most manly, hardworking, thrifty races of India" But the financial difficulties that would be involved, should the half million acres now under poppy cultivation be made unproductive by an adverse report on the use of opium, are very obvious

The dictum of the Royal Commission will not be accepted by the medical world outside of India, nor even there outside of the native races As the *Medical Record* says "So far as Caucasians are concerned we can not too emphatically assert that the Commission's conclusions do not apply at all The use of opium is a distinct evil Its moderate use is impossible There are practically no temperate opium users The opium eater always wants more and continues to want more until he is physically and mentally a wreck"

The defense of the opium habit by Great Britain is made for revenue only

"CHOLERA AND OYSTERS"

Not content with having fixed the stigma of being a typhoid-fever carrier upon the oyster, our English cousins are now attacking that hitherto supposedly innocuous bivalve as a disseminator of Asiatic cholera Following the *British Medical Journal's* series of articles on the conveyance of certain water-borne diseases by oysters and other shellfish comes a report by Dr Thorne Thorne to the Local Government Board upon the distribution of cholera in England in 1893, from which it appears that the disease was conveyed to different parts of the Kingdom either by oysters shipped from, or in the persons of excursionists who had eaten oysters in, Grimsby and Cleesthorpe—two popular seaside resorts at the mouth of the Humber

In its review of the evidence submitted in the report the *Journal* says "Reverting, in conclusion, to the general question, we would point out that no absolute conclusion is come to in the report, but that portion of it dealing with the question of shellfish and the spread of cholera concludes with words which can not be held to go beyond the inference which may properly be drawn from all the facts set out They are as follows 'One thing is certain—oysters and shellfish, both at the mouth of the Humber and at other points along the English coast line, are at times so grown and stored that they must of necessity be periodically bathed in sewage more or less dilute, oysters have more than once appeared to serve as the medium for communicating disease, such as enteric fever, to man, and so long as conditions exist, such as those with which the oyster trade of Cleesthorpe and Grimsby is shown to be associated,

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[1] "The Hodgkins Fund Prize," p 355, vol XXIII, No 9

[1] "Defense of Opium Eating," p 685

—conditions which may at any time involve risk of the fouling of such shellfish with the excreta of persons suffering from diseases of the type of cholera and enteric fever—so long will it be impossible to assert that their use as an article of diet is not concerned in the production of diseases of the class in question ' "

Henceforth let the "blue point" be anathema, the oyster be ostracized—anyway until next September

THE COLLECTIVE INVESTIGATION

In response to many requests, the Journal reproduces in this number the blank form for the collective investigation of the antitoxin treatment of diphtheria, which will be found, as before, following the last page of reading matter The contributions to this attempt to arrive at a consensus of opinion on a most important and warmly debated question are already so numerous as to give promise of an interesting and weighty set of conclusions, and the promptitude of the responses is no less gratifying—the first filled out form was received from Dr E E Fyke, of Centralia, Ill , 252 miles distant, on Monday morning, April 22, the blank form being first printed in the issue of Saturday, April 20 Not less alert was our San Francisco correspondent, Dr Kuhlman, whose letter, under date of April 25, appears on another page

Touching the flat-footed assertions contained in this letter, the Journal will only remark that that which is pronounced "impossible of execution" is being executed *Ex uno disce omnes*

President Cole —As we go to press with a largely increased edition we learn by telegraph of the election of Dr Richard Beverly Cole, of San Francisco, to the Presidency of the American Medical Association His unfaltering zeal in the cause of science, and his faithful services on behalf of the Association, are well known to the entire profession

The next annual meeting will be held in Atlanta, Ga , the city of historical reminiscences, noted for its salubrity, its educational advantages and its commercial activity The members of the Association will have the opportunity of renewing the pleasant acquaintances formed five years ago

CORRESPONDENCE

Editorial Correspondence

Fort Wayne, Ind , May 5, 1895

To the Journal —The Journal Special Train over the Pennsylvania Railroad, left the Union Depot promptly at 3 15 p m , as advertised The train was equal in its appointments to all that had been claimed for it by the railroad company The following are some of those who were on the train

U O B Wingate and wife, Milwaukee, Wis
W H Washburn and wife, Milwaukee, Wis
H B Stehman, Chicago
J T Priestley and wife, DesMoines, Iowa
D W Graham, Chicago
M J Connell, Wauwatosa, Wis
W B Hill, Milwaukee, Wis
F W Rogers, Hartford Wis
W Q Marsh Sierra Mojada, Mex
D M Thurston Beeville Tex
W Whitford Chicago
Chas H Gillespie Chicago
W C Abaly, Madison Wis
G G Beethooven, C Johnston Smith, *Anheuser Bush Brewing Association*
H B Ellis, Los Angeles, Cal
Wm LeMoyne Wills Los Angeles, Cal
C F Greene Chicago
J B Charlton, Clear Lake, Iowa
A C Wedge and wife, Albert Lea, Minn
C G Lauly Iowa
F H Dorland Chicago
C Fenger, Chicago
U B Will and wife, Peoria, Ill
N Senn Chicago
J H Montgomery and wife, Chicago
J S Talbot Chicago
Daniel R Brower Chicago
T J Sullivan and wife Chicago
Albert Sutton, Tacoma Wash
J W Graham Denver, Colo
J B Murphy Chicago
Joseph Eastman Indiana
W B Rogers Memphis, Tenn
W A *Sudduth Minneapolis Minn*
Marie J Mergler, Chicago
Edward Jackson, Denver Colo
A C Corr, Carlinville Ill
W R Fluger Rockford Ill
A W Richards
John W Bean and wife, Ellensburg Wash
James W Cokenower and wife Des Moines Iowa
R Beverly Cole San Francisco
J E Woodbridge Youngstown Ohio
A Garcelon Lewiston Me
J B Hamilton, Chicago
R A McClelland, Yorkville, Ill
M C Knight, Aurora, Ill
Chas Truax, Chicago
A J Horlick Racine, Wis
A F Remick Chicago
M L Hildreth Lyons, Neb
H B Sears, Beaver Dam Wis
H C Whitney, Burlington, Iowa
F I *Sampson, Creston, Iowa*
Hugh T Patrick Chicago
Geo W King Helena Mont
J M Wick Cedar Falls Iowa
D W Smouse, Des Moines, Iowa.
D W Crouse, Waterloo, Iowa
W R Skinner, Cedar Rapids, Iowa.
B H Criley Dallas Center, Iowa
F C Hull, Carlisle, Iowa
H P Newman and wife, Chicago
E F Ingals, Chicago
F B Turck, Chicago
W J Bridgman and wife
M B Ward Topeka Kan
Elmer Lee Chicago
C I Fawcett Stewartville, Minn
B F Uran Kankakee, Ill
B F Crummer Omaha, Neb
Charles M Robertson and wife, Davenport, Iowa.
A W Campbell Chicago
H R Holmes, Portland, Ore
Zan Catter, Chicago
W R Grady, Chicago
W F Grinstead Cairo, Ill
R C *Beatey St Louis*
A L Hummel, Philadelphia
A K Kaime St Louis
Walker C *Taylor St Louis*
B T Whitmore and wife, Chicago
N S Kaime St Louis
S G Gunt Kansas City, Mo
Jas A Lydston, Chicago
G W Reynolds Chicago
F J Maxwell Keokuk Iowa

His Ipse Dixit.

San Francisco, Cal , April 25, 1895

To the Editor —As a member of the American Medical Association, I ask you to give space in the Journal for the following

1 The Journal's scheme for ascertaining the therapeutic value of so-called "antitoxin diphtheria serum" is impossible of execution for the following reasons *a*, it is impossible to identify the so-called Löffler bacillus diphthericus by any description now extant, *b*, it will require at least one year to complete the cycle of a scientific bacteriologic diagnosis of any case of diphtheria—*admitting that* the disease may be due to a bacillus capable of identification, which has not been done *thus far*, *c*, *statistics* unsupported by a scientific bacteriologic diagnosis, including post-mortem examination, are unreliable, inasmuch as the serum-therapy is based entirely upon the factum that diphtheria is caused by the so-called Löffler bacillus diphthericus

2 In a paper read by me on the 16th inst , before the State Medical Society of California, entitled, 'The Status Presens of Antitoxic Blood Serum," I have shown by an abundance of scientific data and statistics *a*, that antitoxin blood-serum antedates Behring as a therapeutic agent, *b*, *that* the so-called Löffler bacillus is *not* the cause of true Bretenneau diphtheria, *c*, that antitoxin blood-serums bear no relation to the causes operating in infectious diseases, *d*, that it does not insure immunity, *e*, that it does not cure, *f*, that it causes chemic decomposition of the blood and is a dangerous remedy, *g*, that it increased the mortality in diphtheria in Berlin during the year 1894 about 25 per cent Respectfully submitted,

Chas G Kuhlman, M D

935 Market Street

BOOK NOTICES

The History of the Pennsylvania Hospital 1751-1895 By Thomas G Morton, M D , assisted by Frank Woodbury, M D 4to, cl , gilt top, uncut edges, pp 574 Philadelphia Times Printing House 1895

The late President Hays, in one of his innumerable addresses, pointed out the necessity of compiling county, municipal and special histories now, while in the greater part of the country, there were living persons who knew the beginning, that in a few years owing to the restless and migratory habits of the people, even the traditions of the first planting would be absent History can not be written by contemporaries, it must be written by those living outside and beyond the influence of the personal animosity or friendship which formed the motive for the recorded deed, and these local "histories" commended by President Hays, afford the best possible data for the after-coming historian

Fortunately, the history of the Pennsylvania Hospital rests on documentary evidence, and we have it here, spread before us in the highest style of art of the photographer and lithographer, an art by which the old documents are preserved, yellow with the century and a half that has passed over them, and wrinkled as they appear in this year of our Lord 1895 Pictures of the old worthies as they appeared in their day are republished, among others a half tone from the identical engraving from which was taken the picture of Benj Rush that we reproduced last week It is true that Americans have no old ruined castles to point out to the visitor, but we can do better, we may point to some of our great charitable institutions, after a century and a half of usefulness not only showing neither weakness nor old age, but young, fresh and bright, greeting the twentieth century with kindliness, and perennial vigor, and those fortunate enough to have a copy of this report, may appropriately say "Well done! Pennsylvania Hospital"

Personal Reminiscences and Recollections of Forty-six Years' Membership in the Medical Society of the District of Columbia, and residence in this city, with Biographical Sketches of many of the Deceased Members By Samuel C Busey, M D, LL D Cl, 8vo, pp 373 Washington, D C 1895

Dr Busey has long been known as one of Washington's literary physicians, a fluent writer, and an eloquent speaker His long identification with the medical work of the District, and his extensive acquaintance, enable him to speak on these topics with *ex-cathedra* utterance His reminiscences of early life in Washington are interesting, not only to those whose lot is cast in the Capital City, but as well to young practitioners everywhere His account is sometimes amusing

"The prescribed fee for each visit was one dollar Many times the bill was settled with a fraction, and often a small fraction of the amount, in fact the beginner took whatever he could get, and was glad to receive such portion, however large or small the bill might be"

Those who now see the beautiful city with the decorative effects that forty years fostering care by Congress has created, can scarcely realize what Washington was in the days of young Busey's advent, as amusingly set forth in this book The account of his student life as a private pupil of Professor Geo B Wood, is a pleasing bit of medical history

A System of Surgery, by American Authors Edited by Frederic S Dennis, M D, Professor of the Principles and Practice of Surgery, Bellevue Hospital Medical College, New York, President of the American Surgical Association, etc, assisted by John S Billings, M D, LL D, D C L, Deputy Surgeon-General, U S A To be completed in four imperial octavo volumes, containing about 900 pages, each with index Illustrated with figures in colors and in black Volume I, 870 pages, 422 engravings and 2 colored plates Price per volume $6 in cloth, $7 in leather, $8 50 in half morocco, gilt back and top Philadelphia Lea Brothers & Co 1895

There are forty-six contributors "named in the list," of whom twelve have contributed to this volume The book appropriately opens with a condensed history of Surgery by Dr John S Billings The assignment of this portion of the work to one who has the great Army library at his command is appropriate We notice an inaccuracy in the five-line notice of the late Frank Hastings Hamilton, of New York In the parenthesis the figures "(1813-66)" should be 1813-86, if, as is apparent, the year of the birth and death is meant by the figures The last twenty years of the distinguished surgeon's life were by no means the least important The chapter on Surgical Pathology, by Dr W T Councilman, is the most satisfactory one hundred pages on this subject with which we are acquainted, and especially when taken in connection with the magnificent chapter by Professor W H Welch on the General Bacteriology of Surgical Infections The chapters on Gunshot Wounds, by Dr P S Conner, Fractures and Dislocations by Dr Dennis, on Traumatic Fever, Erysipelas and Tetanus by Dr J Collins Warren and on Operative Surgery by Dr Stephen Smith are noteworthy contributions We have no hesitation in assigning this book to the first rank among the books of its class

The weak point in most American works on surgery, judged by the European standard, has usually been the pathology, but no more competent hands than these could have been found in America, and we are proud to offer in this work a specimen of the quality of our new school of American Pathology, as promulgated by Welch, Councilman and Warren

The mechanical execution of the book is worthy of the great publishing house that has issued it

NECROLOGY

R L Luckett, M D, of Boyce, La, died April 25 at his plantation near that town After studying at Yale College, he took his medical degree at the New Orleans School of Medicine (now extinct), in 1860 He entered the Confederate ranks as private, but was promoted to surgeon's duty on the staffs of Generals Polk and Bragg He was United States Marshal in 1894 He was in the lower house of his State Legislature from 1874 to 1879, and in the Senate for four years later

Edward Shippen, M D, of Philadelphia, died April 23, aged 68 years He was a native of that city and a graduate from the University of Pennsylvania, in the class of 1848 In the late war he was surgeon of the Artillery Reserves of his State and from 1861 to the end of the war, most of the time being with the Army of the Potomac He was lineally descended from the senior Dr William Shippen, who was one of the founders of the Pennsylvania Hospital, of the school that afterward became the University, and a trustee of the first medical college, and for thirty years a trustee of Princeton College

Mr John Bird, of London, a blind surgeon and author of many publications on the condition of the blind, died late in April at the age of 84 years He was preeminent in the profession for the efforts put forth for the amelioration of the lot of his fellow-sufferers He became a member of the Royal College of Surgeons, England, and a Licentiate of the Apothecaries' Society in 1834, after pursuing his medical studies at St Bartholomew's Mr Bird was the author of "Observations on the Neglected Condition of the Blind in England," the publication of which he followed by a "Lecture on the Capabilities, Rights, and Treatment of the Blind," and a "Letter on the Duty of Superseding the System of Exile Education of the Deaf and Dumb, as well as of the Blind, by Social Education, as recently established in the Communal Schools of Paris" This was published in 1856, and the same year he also wrote a biography of the blind James Wilson, and at other times contributed articles on social pathology and the needs of the deaf and dumb

ARTHUR R OPPENHEIMER, M D, of Baltimore, Md, April 29, aged 22 He was first assistant resident physician of the Johns Hopkins Hospital——Charles Ottilie, M D, of La Crosse, Wis, April 30, aged 64——Joseph Rowland, M D, of Media, Pa, April 29, aged 82——Elsie F Anderson, M D, of Valparaiso, Ind April 29——Thomas Seaton, M D, of Bolivar, Pa, April 29, aged 82——Spencer Byrne, M D, of Marengo, Ind, April 28

PUBLIC HEALTH

Free Public Baths —The New York Legislature has enacted a law making it mandatory upon cities of that State having populations of over 50 000 inhabitants to establish free public baths, and authorizing cities with less than 50,000 inhabitants to raise money for a like purpose Cleanliness, says the Hindu, is the key to heaven

Bacteriologic Laboratory for Paris —M Dubois, on behalf of a special committee of the Municipal Council of Paris presents a report advising the creation of a special laboratory for the bacteriologic examination of diphtheria The committee is of opinion that there is urgent need of installing an official laboratory for gratuitous examination of microscopic preparations and cultures Apart from the Pasteur Institute, which desires to be confined to its own sphere, the committee thinks there is no laboratory better qualified for this work than that of the microscopic and bacteriologic laboratory of Paris directed by Miguel The Council voted an appropriation of 10,000 francs for this purpose [1]

Poisonous Dried Apples.— United States Consular Agent Krauss at Zittau in Germany, reports to the Department of State that American evaporated apples offered for sale there have been submitted to a chemic analysis and found to contain oxid of zinc The investigation was made at the instance of the police department, and samples were taken from three grocers At the request of one of the merchants a chemist made an analysis of some of the apples, and certified that the quantity of zinc salt contained in a very large portion of apple jam made from the apples in question could convey into the human system about one-fifth as much zinc as may be given to infants without causing nausea No case could be found, however, where the fruit had caused illness

The Hunger of the World —Mr E G Ravenstein, the eminent English geographer and statistician, has made some calculations to find when the earth will be unable to find nourishment for its population and they will be forced to cannibalism or starvation According to him when the number exceeds 5,994,000,000, or in round numbers, 6,000,000,000, this emergency will arise, and Mr Ravenstein believes the population of the globe will reach this figure in 284 years more He points out that the average decimal increase is 8 per cent, divided as follows Europe, 8 7 per cent, Asia, 6 per cent, Africa, 10 per cent, Australia and Oceanica, 30 per cent, North America, 22 per cent, South America, 15 per cent

Barbarism of Ignorance —A few weeks since a quarantine guard at Shawneetown, Ill, shot a citizen who was attempting to escape from a smallpox quarantine On the 4th inst a "pest-house riot" broke out at Winchester, Ky, where a colored prisoner in the county jail has smallpox A building, erected five miles from the town for his reception, was burned down during the night, and the farmers armed with rifles are guarding the roads in anticipation that the smallpox prisoner may be taken through their neighborhood to some obscure locality Meanwhile the sheriff, whose residence is in the jail, has his smallpox prisoner on his hands and can not get him out of town The barbarities of shotgun quarantines are the results of ignorance and superstition—foster parents of cruelty

Smallpox in Indiana and Ohio —Dr C N Metcalf, Secretary of the Indiana State Board of Health, reports to the JOURNAL, under date of May 7, 1 case of smallpox at Terre Haute, 1 death, 2 cases at Evansville, 1 case at Indianapolis and 1 death at Tell City Dr Metcalf adds that the persons sick are all colored and the origin of the disease is not known

Under the same date Dr C O Probst, Secretary of the Ohio State Board, reports in Cincinnati 24 cases and 7 deaths, making in all 80 cases and 17 deaths, all cases have been taken to the Branch Hospital, 54 of the cases occurred in one square on the river front, all the inhabitants of this square have been vaccinated In Cleveland 8 cases have been reported, the first cases were operatives in a woolen mill, and the origin of the disease is supposed to be infected rags, all of the cases have been removed to the Infectious Disease Hospital No other cases reported in the State

Rewards of Early Rising —Aside from the helminthous property ascribed to the early bird by the adage, a recent newspaper writer implies that if one would become a healthy and well-preserved monarch all that is necessary is to acquire the habit of early rising In support of his theory he cites the Emperor Francis Joseph of Austria, who invariably retires to rest at 9 and is up at 5—sometimes even at 4—in the morning and who is "athletic, elastic and youthfully active" King Humbert of Italy, likewise remarkably well-preserved, is also up with the lark and has taken his first breakfast long before the majority of his subjects are out of bed Among the early risers Emperor William, the Queen Regent of Spain, King Charles of Roumania, King Oscar of Sweden, King Leopold of Belgium—indeed, says this writer, "it only requires a passing glance at the various thrones of Europe to show that those monarchs most healthy and well-preserved for their years are precisely those who, according to the new-fangled doctrine of the medical authorities ought to be the ones most physically decrepit" The moral of which has been already pointed out Get up early if you would be a healthy and well preserved monarch

Effective Disinfection —Under the Sanitary Act of 1891 the sanitary authorities of London are bound to provide temporary shelter free of charge to all persons who are compelled to leave their dwellings for the purpose of enabling such dwellings to be disinfected To what extent this obviously necessary measure is complied with is not definitely known, but the American reader will infer that like many other well-intended sanitary requirements it is more frequently honored in the breach than in the observance Dr Anthony Roche in a letter to the *Irish Times* calls attention to the London requirement with a view to securing its adoption in Dublin, whereupon the *Medical Press* says "The requirement is but little known in the metropolis" As Dr Roche points out, it is useless to disinfect infected premises if the occupants whose clothing is saturated with infection are allowed to wander about the streets or carry the infection into neighboring premises

Influenza as a Factor of Increased Death Rates —The returns of deaths from influenza during the recent prevalence of this disease bear no relation to its actual influence on the mortality of the period A very large percentage of the deaths from pneumonia, bronchitis, heart disease and kidney disease should be charged up to this insidious and protean malady In a recent clinical lecture [1] Dr James Tyson said "Another serious danger of influenza is its tendency to convert harmless, often latent, disease into serious disease I especially refer to kidney and heart disease One of the results of the more recent practice by the life-insurance companies, in examining the urine of all persons seeking insurance, is the discovery that albuminuria is present in many persons who are quite free from other symptoms—a condition not serious in itself If such a man gets influenza, however, his mild albuminuria will sometimes become a serious one The same is true of heart disease A murmur unattended with other symptoms may, after an attack of influenza, become associated with other symptoms and assume a serious import"

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[1] Le Progres Medical

[1] University Medical Magazine

The Typhoid Milk Can—The recent distressing outbreak of typhoid fever in Stamford, Conn, traced unmistakably to the milk supply of one dealer, has awakened renewed interest n the question of the sanitary control of dairies and milk distribution Dr Welply, of Belfast, Ireland, has just issued a timely monograph on the subject—"Creameries and Infectious Diseases" He deals at some length with an outbreak of typhoid under his own observation in which the origin of the epidemic was traced beyond a doubt to the consumption of "separated milk" distributed from a creamery in the neighborhood "Separated milk" is the skim milk left after the cream has been removed, to which is then added enough fresh milk to bring it just within the legal standard, and it is then sold as new milk in the large towns As the creamery receives the milk from several dairies, one infected supply may pollute the product of all the others contributed to the same creamery, and in this way a single case of rural typhoid may become almost infinitely multiplied Dr Welply traced up such an infected dairy as the cause of the outbreak, and then goes on to show how minute a quantity of the morbific matter is capable of wellnigh indefinite multiplication in such an ideal culture medium as milk He found in his examination that the cows in this dairy were milked by a person whose hands had been soiled by typhoid dejecta and that some of the dairy maids acted also as nurses to the sick Among other practical points he refers to the fact that few cows can be thoroughly milked unless the hand and the teat be kept moist, to which end the majority of milkers wet both surfaces with the first portion of milk that is drawn Dr Welply advocates two principal measures of prevention—first, thorough and frequent dairy inspection by competent and independent inspectors, and secondly, compulsory notification of all cases of illness occurring in dairies which send milk to creameries

Health Reports—Sanitary reports to the Supervising Surgeon-General, Marine-Hospital Service

SMALLPOX—FOREIGN

Argentine Republic Buenos Ayres, month of February, 10 deaths
Austria Buda-Pesth, April 1 to 8, 3 cases
Bohemia Prague, April 6 to 13, 3 cases
Brazil Rio de Janeiro, March 23 to 30, 3 deaths
Egypt, Alexandria, March 19 to 25, 4 cases, 1 death, Cairo, 3 cases, 3 deaths
England South Shields, April 13 to 20, 6 cases, Birmingham, April 6 to 13, 1 case, 1 death, Liverpool, April 6 to 13, 1 case—April 13 to 20, 5 cases, 1 death, London, April 13 to 20, 4 cases, Manchester, April 13 to 20, 1 case
Holland Amsterdam, April 13 to 20, 1 death, Rotterdam, April 13 to 20, 5 cases, 2 deaths
India Calcutta, March 16 to 23, 233 deaths
Ireland Dublin, April 6 to 13, 10 cases, 2 deaths—April 13 to 20, 8 cases—for three months ended March 30, 642 cases, 81 deaths
Scotland Edinburgh, April 1 to 6, 7 cases, 1 death—April 6 to 13, 3 cases—April 13 to 20, 2 cases 1 death, Glasgow, April 13 to 20, 8 deaths
Russia Batoum, April 3 to 10, 8 cases, 1 death, Moscow, April 1 to 6, 2 cases, 2 deaths, Odessa, April 1 to 13, 1 case, Warsaw, April 1 to 6, 1 death, St Petersburg, April 6 to 13, 1 death
West Indies San Juan de Porto Rico, April 3 to 10, 1 death—April 10 to 17, 1 death

SMALLPOX—UNITED STATES

Arizona Nogales, May 2, 39 cases
Florida Key West, May 4, 1 case
Indiana Evansville, April 30, 2 cases
Michigan Smallpox reported at Detroit and Brownstown Township, during week of April 20 to 27
Mississippi Vicksburg, May 1 2 cases
New Hampshire Claremont, April 20 to May 3, 11 cases, Croydon, 7 cases, Newport, 1 case
New Jersey Hoboken, April 20 to 27, 2 cases
Ohio Cincinnati, April 27 to May 4, 11 cases, 1 death
Pennsylvania Philadelphia, April 20 to 27, 10 cases
West Virginia Wheeling, March 25 to May 3, 12 cases, 1 death

YELLOW FEVER—FOREIGN

Brazil Rio de Janeiro, March 23 to 30, 20 deaths, Santos March 23 to 30, 108 cases, 87 deaths
Cuba Havana, April 18 to 25, 3 cases, 1 death, Santiago de Cuba, April 1 to 28, 10 deaths

CHOLERA—FOREIGN

Argentine Buenos Ayres, February 1 to 28, 45 deaths
India Madras, March 23 to 30, 1 death, Calcutta, March 16 to 23, 103 deaths
Arabia Camaran quarantine station Cholera was brought to the station by the S S *Mohamedi* and the S S *Yubeda* March 23 to 30, 48 cases, 13 deaths

SELECTIONS

Surgical Tuberculosis—Isnardi (Turin, 1894,) reports success in the use of oil of turpentine He uses this partly as an ointment with vaselin, equal parts, in affections of the skin, partly undiluted as an injection into fistulas or abscesses Fistulas are first curetted, and abscesses are aspirated Very intense inflammation follows with rise of temperature to 40 degrees C, but with no severe general symptoms In four to six days abscesses are to be incised, packed with sterilized gauze containing the turpentine ointment The results, as detailed by the writer in eighteen cases in children were most promising—*Centralblatt fur Chirurgie*

Treatment of Leukoplakia—L Leistikow, in *Monatsheft fur praktische Dermatologie*, 1894, No 3 Leukoplakia of the mouth is generally very hard to influence therapeutically, for this reason every new remedy meets with ready trial The success which the writer had with patients who had had syphilis, but in whom specific remedies proved useless, was worthy of note Several times a day especially after meals and at bedtime, the following paste was applied with a swab terræ siliceæ, 1 5, resorcini 3, adipis 0 5 After eight to fourteen days a shriveling was noticed, then the slightly inflamed mucous membrane was brought to a normal condition best by balsam of Peru The accompanying hyperplasia of the lower lip was also diminished, but eventually the cauterization had to be repeated two or three times—*Centralblatt fur Chirurgie*

Hydatid Fremitus and Resonance—(*Policlinico*, 1894, No 11) Santini drew the attention of the Academy of Sienna to the fact that a deep sonorous tone is heard on percussing an echinococcus cyst, if at the same time one listens with the stethoscope Ravogli proved this statement on one living subject and also on the extirpated cyst, afterward also experimentally on India rubber bladders He therefore arrives at the following conclusions echinococcus cysts yield not only the feeling of the so-called hydatid fremitus on palpation and percussion, but also to coincident auscultation a characteristic tone, the hydatid resonance To find these signs often requires no little pains Failure is quite possible if the cyst wall is very thick or has degenerated, if the contents are more or less thick, and finally, if the cyst lies too deep and is covered with thick layers of tissue The best method of examination is to place the left hand firmly on the tumor and to percuss the terminal phalanges with the middle finger of the right hand The hydatid resonance is more easily found than the fremitus, and may be recognized in cases in which the latter symptom is missed

In ovarian cysts containing thin fluid, hepatic abscesses, etc , neither of these symptoms was ever found Elasticity and extensibility of the cyst wall, and clear contents are necessary for their production —*Centralblatt fur innere Medicin*

Ether for Anesthesia in Munich —(P Ziegler, *Munchener med Wochenschrift*, 1894, No xxiii) Ether has been used at the surgical clinic in Munich since May 1, 1893 The experience in 600 cases is now made public In conclusion, the unpleasant sensation of suffocation at the beginning, the cyanosis, the excessive secretion of mucus and saliva, the tardy relaxation so common in alcoholics, the frequent partial return to consciousness when the cone is removed, are annoying, but can be obviated by greater experience Over against these is the diminished danger, since cardiac syncope is not primary, but secondary to respiratory syncope, which can be more easily overcome Ether is not recommended for operations on the face, and is directly contraindicated in all diseases of the air passages, including compression of the trachea He declares himself in favor of the use of ether, and the latest statistics justify him, for 1 death has resulted in 1,900 cases of chloroform anesthesia, while with ether, 1 death in 26,000 cases —*Centralblatt fur Gynäkologie*

Heteromorphism of Bacteria under the Influence of Lithium Salts.—Herbst, in the domain of zoology, by the addition of lithium and potassium salts to sea water, saw the eggs of the sea urchin (*Echinus microtuberculosus*) assume a different, hitherto unknown formation, reasoning by analogy, Gamaleia (*Wratsch*, 1894 Nos 10 and 20) tried the effect of lithium on various bacteria and recorded a series of altered forms resulting

Twenty-four hours after the addition of 5 to 1 per cent lithium chlorid to a cholera bouillon culture or 1 to 2 per cent to a cholera agar culture 1, giant spirilla were seen, having considerable length and breadth, unequal thickness and distinctly corkscrew like cells, 2, further, especially if the percentage of the lithium salts be increased, spherical or amœboid cells The spherical forms were in general easily stained, wholly or only in part, by alkalin anilin dyes , often the contents of these forms were finely grained with crystalline luster or pierced by lines or rods A third and less common form displayed very fine filaments, which if pressed more firmly together formed a fine felt-like tissue Here and there the impression is given that these filaments are offshoots from the thick spirilla

In contra distinction to the involution forms which arise in decaying colonies, Gamaleia calls this transformation, heteromorphism, a term introduced by himself, since the forms he describes are found in fresh cultures and there is no appearance of degeneration, as is manifest from the imperfection of the heteromorphous forms, from their quantitative preponderance over the number of normal bacteria in the preparation, further from their larger size, their ease in staining and from the absence of the fine-grained, coccus like destruction, characteristic of old cultures Besides, the term, heteromorphism, is least prejudicial to the question as to the retrospective or prospective character of the forms

Typhus bacilli showed after the addition of lithium chlorid to cultures exactly the same three types of changed forms Other forms of bacteria, as milzbrand and diphtheria, showed no tendency to heteromorphism, nor was there any such manifestation, if sodium, potassium, caesium or rubidium were added to cholera or typhus cultures As to the viability of the heteromorphous bacteria, it is to be noted that the giant forms have vital energy and retain their characteristics after inoculation on common gelatin The viability of the other forms seems undecided But, on the other hand, bacteria may acquire a certain indifference to the action of lithium, for successive inoculations on nutrient media containing the same proportion of lithium lead to a decline and disappearance of the heteromorphism —*Centralblatt für innere Medicin*

MISCELLANY

Addresses at the Forty seventh Annual Meeting —(*By telegraph to the* Journal) —The addresses at the Forty-seventh Annual Meeting of the American Medical Association will be delivered by Nicholas Senn, M D , Chicago, on Surgery , William Osler, M D , Baltimore, on Medicine , George H Rohé, M D , Baltimore on State Medicine

St Francis Hospital, New York —Under the will of the late Mansay P Dodin, the sum of $1,000 was recently made over to the Sisters of the Poor who conduct the hospital above named

The Willard State Hospital for the Insane, New York —A destructive fire, without loss of life, broke out at this institution on the 28th ultimo, and consumed property valued at $150,000 The entire institution was in danger at one time, and all the patients were gotten ready to vacate

Reduction in the Price of Antitoxin —The New York City Board of Health has recently reduced the cost of the serum produced by its Bacteriologic Bureau, as follows " First quality, from $1.25 to 75 cents , second quality, $2 50 to $1 50 , third quality, $4 to $3 " The Board will continue to supply charitable institutions and poor patients free

An Accumulative Doctor —A Socialist member of the Belgian Parliament receives $700 per annum as physician to the lock hospital, $320 as physician to other hospitals, beside $200 for his services in the custom house Add to this $800 for his parliamentary services, and the *Gazette Medicale de Liege* thinks the doctor should contrive to live on his practice

Dr Max Simon Nordau, the author of " Degeneration," is a medically educated man He was born at Buda-Pesth in 1849, took his medical degree in 1873, traveled and studied medicine for five years, at the end of which time he made his permanent home in Paris He became a correspondent of the *Frankfurter Zeitung* and other German journals, also contributing social and political writings to various French reviews, some of which attracted marked notice

Dr A. Conan Doyle, whose books have had a great circulation in this country, came hither last winter to deliver lectures From certain comments in the papers it would appear that the rewards of this visit were not such as to lead to its repetition In fact, in the *World*, Dr Doyle has stated that he does not care to visit America again in the winter season, for the reason that our "railroad cars are kept too hot " The *World* suggests that really he found that his audiences were too cool for him

David S Ingalls —The late David S Ingalls, of Springville, New York, left an estate valued at over $600 000, the most of which was bequeathed to charitable institutions The will was hotly contested by two surviving sisters and a niece One of the sisters was alleged to be of unsound mind The contest has been ' on" since early in 1893 The hospitals and other charitable legatees will receive about two thirds of the estate, the contesting relations and counsel will get one-third, nearly

Wound of the Bladder During Vaginal Hysterectomy —Jacobs reports that after incising the vaginal mucous membrane in the anterior cul de sac, which would allow him to place the utero vaginal sutures, he proceeded with the finger to detach the cellular tissue separating the supra-vaginal portion of the cervix from the bladder, when suddenly and without any warning the index disappeared in the bladder The author sutured the viscus at once and found then that the muscular fibers of the vesical wall only existed in patches, consequently the suturing was very laborious but it was finally accomplished with fine catgut in two stages Owing to this accident the vaginal method was abandoned, ten days later, the fistula having closed, abdominal hysterectomy was performed with recovery [1]

Iodid of Potash in Actinomycosis —Berard has collected all the cases of actinomycosis in which iodid of potash has been used This treatment has brought about recovery in about 95 per cent The iodid of potash may then be considered as a specific for this affection What is the mode of action of the medicament? The experiments of Berard show that the actinomyces grow readily in cultures to which iodin has been added It seems probable, then, that the iodid of potash acts especially on the anatomic elements [2]

Treatment of Nasal Hypertrophy —At a recent meeting of the Paris Academy of Medicine, Lucas-Championniere showed a patient affected with nasal hypertrophy from acne Ollier's method—decortication by the thermo-cautery without autoplasty and with a simple, weak antiseptic dressing—had given a very good result The only difficulty is not to clog the nostrils and to touch the septum as little as possible during the decortication Marc See stated that, instead of decorticating all the nose, he leaves strips of skin between the cauterized areas, his method, which he has used for fifteen years, may be done without chloroform In replying, Championniere maintained that in cases as complex as the one he presented, total decortication is preferable, it gives a more complete and especially a much more rapid result [3]

Contra-indicated During Pregnancy —Huguenin mentions as chief of the remedies which are dangerous to the pregnant woman, salicylate of soda and ergot Purgatives—castor oil, mineral salts and especially aloes—should be avoided Oxalic acid and its salts—oxalate of potash, etc —may prove dangerous Antipyrin frequently taken inhibits the lacteal secretion, cocain locally applied for fissured nipples has the same effect, and should be proscribed for nursing women As to operative measures, they are not absolutely contra-indicated, we may, for example, extirpate a peri-uterine tumor, the development of which hinders pregnancy, provided the operation is speedy and little blood lost It is better to wait until the fourth or fifth month before operating Operations in the vagina or uterus, no matter how minor, should be avoided in order to avoid suspicions of abortion in the patient's mind.[4]

Action of the Nervous System on the Lymphatics —The study of the innervation of lymphatic vessels presents great difficulties and our knowledge of the subject is confined to some vague and incomplete notions MM Camus and Gley have tried to fill this gap by a series of ingenious and demonstrative experiments These physiologists have been able to register the movements of the receptaculum chyli and the thoracic duct in the dog By exciting the trunk of the left splanchnic nerve or the thoracic sympathetic they cause, according to conditions, dilatation and contraction of the receptaculum and duct Hence there are in the same nerve trunk constrictor and dilator fibers for the same vessel, but the latter predominate This contractility of the lymphatics under the influence of the nervous system plays a considerable rôle in the lymph circulation The alternate movements of dilatation and contraction are somewhat important in certain cases, for they may be compared to the lymph hearts of certain lower vertebrates These experiments also show that local circulations may be produced in the lymph vessels as in the blood vessels [5]

Professor Huebner of Berlin on Antitoxin —The address, before the Thirteenth Congress for Medicine, at Munich early in April, by Professor Huebner, touches upon the present treatment of diphtheria at the Berlin hospitals He holds that the statistics there show a marked reduction in the rate of mortality by that disease since the introduction of the use of the serum He notices that the tendency of the membrane to spread to new localities is reduced Out of 181 cases there was such spread in only 16 cases A spread of the disease to the larynx was not observed, in 19 per cent exanthems were produced, in a few cases fever followed the injections, and in fewer yet there was pain in the joints The latter was transient and produced no injury to the system The immunizing property of the serum was not of long duration The concluding paragraphs of this address are interesting, as given below from the *Medical Press*, for April 24 " He had never believed a remedy would have such a great influence, such an immediate action, he had never believed himself so much indebted to a physician as to the discoverer of diphtheria curative serum With confidence, he concluded, we could proceed to the building up of our experience, with good conscience we could call out to every colleague " Prove for thyself and prove as often as thou canst, enough of the noble metal is here How high its carat, to determine that requires the inexorable scales of time Art, however, has the time, for it is long "

Hydatid Cysts of the Lung —Behr insists on the great importance of the question of infection or non-infection which governs at the same time the evolution and the pathologic anatomy of cysts of the lung In the latter case the hydatid is an aseptic foreign body which only reveals its presence by symptoms of compression In the former it is not long tolerated by the tissues and numerous complications ensue As regards the penetration of the six-hooked embryo the generally accepted opinion is that it is transported by the veins through the hepatic filter to the right ventricle and thence into the pulmonary capillaries The dimensions of the embryo of the hepatic capillaries render this opinion probable Nevertheless the invasion by the air passages seems none the less probable and is admitted, especially in Australia where hydatids of the lungs are relatively frequent The eggs of the tænia may very easily become mixed with dust and be thus inspired Diagnosis is very difficult, because there are no pathognomonic symptoms and often the small cysts are only discovered at the necropsy The most constant sign is dyspnea and its intensity depends on the volume and situation of the tumor and the patient's respiratory capacity Cysts in the upper part of the lungs seem to give rise to more intense dyspnea than those at the base, even if of the same size Pain is the second important symptom for "hydatids of the chest are often more painful than those of any other region " The pain is acute, persistent, with exacerbations and may radiate far beyond the part affected [1]

Therapeutic Applications of Anemonin —Anemonin has been extolled in the treatment of bronchial catarrh, in convulsive coughs and in asthma The dose is from 2 to 4 centigrams daily in capsules or alcoholic solution Larger doses cause cephalalgia and a feeling of weight in the extremities In amenorrhea and dysmenorrhea Bovet has used it in doses of 5 to 10 centigrams daily—but never to exceed 20 According to this author it is the analgesic *par excellence* for uterine disorders It is easily decomposed in the intestine, however, so its action is uncertain *Anemone pulsatilla*, in the form of tincture, was highly extolled in 1882 by Schapter for reflex eclampsia, palpitations, ephemeral febrile conditions following violent emotions or fatigue, hay fever—in short, in all neuroses of sympathetic origin For these he prescribed 20 to 100 drops of the tincture in increasing doses E Martel advises the treatment of acute orchitis by tincture of anemone—20 drops daily in divided doses Martel says that by its use the pain is much diminished and that it has a tendency to resolve the inflammatory process Anemonin, extracted from the above plant and studied by Bronwsky in 1886, is very toxic Two grams injected under the skin of dogs caused death in twenty-four to thirty six hours after increasing dyspnea, slowing of the heart, torpor and paralysis Death seemed due to cardiac paralysis Bronwsky has used anemonin with success in bronchial catarrh, asthma and convulsive coughs He gives 5 to 10 centigrams daily in the form of powder in two doses [1]

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[1] These de Paris
[2] Le Progres Medical
[3] Arch de Tocol et de Gynecol
[4] Le Progres Medical
[5] Arch de Gynecol

[1] These de Paris

Before or After?—How many physicians direct the time of taking medicine on well defined chemico physiologic principles? The *Medical and Surgical Reporter* has attempted to furnish such principles in the following Iodin and iodids should be given on an empty stomach, when they rapidly diffuse into the blood, if given during digestion the acids and starch alter and weaken the action Acids, as a rule, should be given between the digestive acts, because the mucous membrane of the stomach is then in a favorable condition for the diffusion of acids into the blood Acids may be given before food when prescribed to check the excessive formation of the acids of the gastric juice By giving it before meals you check the osmosis stomach-ward of the acid forming materials Irritating and dangerous drugs, —such as salts of arsenic, copper, zinc, and iron—should be given directly after food, except where local conditions require their administration in small doses before food Oxid and nitrate of silver should be given after the process of digestion is ended, if given during digestion, chemic reactions destroy or impair their special attributes and defeat the object for which they were prescribed Metallic salts, especially corrosive sublimate and also tannin and pure alcohol, impair the digestive power of the active principle of the gastric juice, so should appear in the stomach during its period of inactivity Malt extracts, cod-liver oil, phosphates, etc, should be given with or directly after food, so that they may enter the blood with the products of digestion

Hospital Notes

St Clair Street Hospital—At a meeting of the St Clair Street Hospital trustees held in Cleveland, Ohio, April 21, it was decided to proceed at once with the erection of the proposed hospital annex, estimated cost $2,500——St Luke's Hospital at Davenport, Iowa, was formally opened April 30——The Lamar Hospital, at Augusta, Ga, has been formally opened——A movement is on foot to establish a public hospital at Tiffin, Ohio——Plans have been made for the enlargement of St Bernard's Hospital at Council Bluffs, Iowa The probable cost of the addition will be $40,000——The corner stone of the Vermilion County Hospital, Illinois, was laid May 11 Many secret societies participated in the event——The managers of the Pennsylvania Hospital at their annual meeting held May 6, elected Dr James C Wilson to the medical staff as attending physician, in place of Dr Morris Longstreth——The new memorial surgical pavilions of the Pennsylvania Hospital were inspected by the contributors and managers and will shortly be utilized for patients, thus nearly doubling the capacity of the hospital——The recently issued "History of the Pennsylvania Hospital," by Dr Thos G Morton, assisted by Dr Frank Woodbury, was presented to the contributors at this meeting and a formal vote of thanks therefor was passed unanimously

Louisville Notes

Smallpox—Special Examiner Long reports from Princeton that there are sixteen cases at that place, with three exceptions all occurring in the persons of negroes This prevalence has been due to the fact that the local authorities did not know that the law compelled all infected persons to be confined in the local pest-house,—and there has been a free communication between the cases and unvaccinated persons

City Hospital—The four regular schools have furnished the Board of Public Safety with a list of physicians and surgeons who are to represent them upon the visiting and consulting staff for the coming year It is stated that there will be no conflict between the two schools of medicine and everything seems to be adjusted satisfactorily

Death Report—The report for the past week shows a total of 62 deaths Of these 4 were due to typhoid fever, 12 to pneumonia There were 2 stillbirths The report for the month of April shows a total of 366 deaths There were 43 deaths from consumption, 4 from puerperal fever, 9 from typhoid fever, and 98 from pneumonia There were 201 males and 165 females, 258 white, 108 colored Sixteen deaths occurred at the City Hospital and one at the eruptive hospital from smallpox The death rate for the month was only 1 5 per 1,000 of the white population and 3 per 1,000 among the colored people

Good Roads—Our country practitioners are so much interested in the subject of good roads that we give place to the following

STATE ROADS IN MASSACHUSETTS

For the past three years the press of the United States has so thoroughly discussed the different advantages of good roads, and so universally indorsed this reform, that all classes of our citizens appreciate the necessity of, and are anxious for, the immediate adoption of such laws as will hasten the construction of State highways Massachusetts has from the outset taken the lead in this matter, and the spirit of her Legislature has been shown by making the Highway Commission a permanent one, and by appropriating $300 000 to be expended, under the immediate supervision of the Commission, in constructing new and rebuilding old roads As a natural result of the popular agitation and the monster petition, which I had the honor to present to Congress in 1893, the United States recognized the necessity of a move in this direction, and under the "Agricultural Bill" made a special appropriation of $10,000 to meet the expense of a careful investigation into the condition of roads throughout the country, and for the publication of such information as would assist the people in bettering their highways The Department of Agriculture has issued a number of bulletins, and it is gratifying to learn that more than a score of States have already passed new road laws, while nearly all the others are planning for the adoption of measures for the promotion of this reform Experience has shown that the course pursued by Massachusetts is the one which commends itself most strongly, both to the people at large and to their legal representatives, the various State Legislatures, and it is natural to suppose that if all were familiar with the work here the knowledge would be utilized to bring about similar legislation wherever the method of procedure is still unsettled For this reason I would call to your attention and urge upon you the advisability of enlightening your readers on the good work we have already accomplished Starting in June, 1892, a Temporary Commission was appointed to examine into the condition of the roads, and to draft a bill providing for the improvement of the highways of the Commonwealth The law suggested by the Commission was, with some changes, passed in June, 1893, but, before any petitions for construction of State highways were submitted to the General Court, an act was introduced and passed June 20, 1894, increasing the powers of the Commission, and permitting the selectmen of any town, or the mayor and aldermen of any city, as well as county commissioners, to petition the Highway Commission for taking roads as State highways In place of submitting to the Legislature a separate bill for the construction of each road, it was voted that the appropriation be used by the Highway Commission, without further legislation, in building State highways The $300,000 has been pretty evenly divided among fourteen counties Before deciding which of the many petitions should be granted an official visit was paid to each locality, and full information as to the value of the proposed improvement collected While this method has distributed the work in small sections of roads thus increasing the expense per mile, the advantage to the people at large will be still greater, for the reason that each portion of the State highway constructed is intended to be an object lesson to those living near by

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[1] Les Nouveaux Remedes

County commissioners and other officers will watch the work as it progresses, and follow out the same lines in building county and other roads which are not intended for State highways The plan is to build, section by section, such roads as will connect the great centers of trade, and join with through roads in other States, so that both local and interstate communication will be benefited Under date of January, 1895, the Massachusetts Highway Commission has rendered a report which covers the work of the past year, and this publication should be consulted by those who are considering legislation The provisions of our law will permit contracts for the construction to be let to municipalities or to private corporations, but the former arrangement is preferred, as it is more effectual in teaching the people the art of road building, and protects the State against cheapening the work by the importation of foreign laborers, an element which is apt to be objectionable A resident engineer is appointed by the Commission, and it is his duty to be in attendance, and keep a correct account of all items to be paid for by the State Wherever the traffic was of sufficient proportions to warrant it the roads have been broadened The advantage to owners derived from the construction of the way is, as a rule, so much greater than the injury to them by widening the road that, in a large majority of cases, the town officers have been able to procure releases without any cost Thirty-eight sections have been contracted for, and only eight of them are to have a width of eighteen feet of hardened surface, all others being fifteen feet wide As the primary object is to get length of way, the Commissioners are considering the advisability of building single-track roads in the thinly-settled districts These would not be over nine feet wide, with here and there portions of double width as convenient passing points for carriages A mile and a half of such roads can be built for less than the cost of a mile of fifteen feet width, and the advantage in getting produce to market is not lessened, provided such construction is confined to localities where the average traffic is from six to eight vehicles an hour There is need of legislation to regulate the care of, and responsibility for, sidewalks on State highways These being of purely local advantage should be under the supervision of the town, the wheelways alone being constructed and kept in order by the State Progress has been made in the laboratory work on the road building stones of the State Experiments of this kind are carried on at Harvard University in the Lawrence Scientific School, whose Dean, Prof N S Shaler, is a member of the Highway Commission The chief aim of these inquiries has been to determine the qualities which constitute fitness for road making This will be of value to the Commission in enabling them to utilize the road material near at hand and thus lessen the cost of construction As this phase of the work progresses, maps are made showing the location of all deposits suitable for road building A number of towns have already appropriated money to build their streets in the same careful manner as those constructed by the State, and others have purchased road machinery with the intention of extending the work on roads other than State highways Careful consideration has been given to the plan of planting shade trees along the highways With this end in view, experts have been consulted concerning the best varieties for the purpose, and the wayside trees have been examined, so as to determine the species well adapted to the climate and soil of Massachusetts As the estimated expense of procuring and planting these trees is not less than $500,000, the Commission has rightly made this question secondary to road building, but in the meantime they are collecting such data as will enable them to work with profit on the adornment of the roads after the construction is well in hand The American and English elms have the advantage of fairly rapid growth, with shade high above ground, and the leaves falling from them give but little obstruction to the gutters They have the disadvantage of being subject to the attacks of insects, so that the cost of protecting them from these pests would be considerable Maples grow well and are beautiful, though they often shade the road too much It is the custom in parts of Europe to plant the roadsides with trees which yield profitable crops In France and Germany, for example cherry trees abound In these countries the yield of the wayside trees belongs to the neighboring land owners, but in some cases to the community, and their product is well guarded by law There will be more or less experimenting on the part of the Commission before they decide upon the species to be planted The law provides for the beginning of this work in the spring of 1895 and from that time it will be carried on slowly, so as to give us the benefit of experience Every State should make a beginning on road improvement In thinly-settled regions of the country, where the people do not feel able to undertake much they can do no better than to start the reform by constructing sections of single-track roads No community can afford to neglect the common roadways Our prosperity is too intimately connected with the facilities for communication I have spent many thousands of dollars in inaugurating and advancing this reform, and continue to take an active part in it, though for a long time I have not addressed you on the subject The interest is now general, and the leaders numerous, consequently there is a demand for road news, more especially for the recent advancements in the line of actual experience Here is what we have done in the old Bay State Will you not publish it, or a portion of it, for the benefit of your readers, many of whom, without doubt, are directly or indirectly connected with, or interested in the development of the cause?

Boston, Mass

Very truly yours,

Albert A Pope.

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties officers serving in the Medical Department, U S Army, from Ap 27, 1895, to May 8, 1895

First Lieut Henry D Snyder, Asst Surgeon U S A, is granted leav of absence for two months, to take effect upon the conclusion of hi examination to determine his fitness for promotion

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending May 4 1895

P A Surgeon E R Stitt, detached from U S S "Chicago," and to Nicaragua Canal Board inspection of work on the Isthmus

Surgeon H G Beyer, detached from Naval Academy, and to the "Monongahela"

P A Surgeon L W Atlee, from the New York Hospital, and to the 'Richmond'

P A Surgeon J M Edgar, from the "Richmond," and to the school ship 'Saratoga'

P A Surgeon V C B Means, from the "Saratoga," and to the New York Hospital

Asst Surgeon Robert Boyd, from Philadelphia Hospital, and to the 'Monongahela'

Asst Surgeon Lewis Morris, ordered to the Philadelphia Naval Hospital

Marine-Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the fifteen days ended April 30 1895

Surgeon C S D Fessenden, detailed for duty on board for examination of officers revenue cutter service, April 17 1895

Surgeon J B Hamilton, granted leave of absence for twelve days, April 20, 1895

Surgeon G W Stoner, detailed to represent Service at meeting of American Medical Association April 25, 1895

Surgeon F W Mead, detailed as chairman of board for physical examination of officers, revenue cutter service, April 17, 1895

P A Surgeon C E Banks, when relieved to report at Bureau for duty as chief of purveying division, April 24, 1895 Granted leave of absence for fourteen days, April 29 1895

P A Surgeon L L Williams, detailed for duty on board for examination of officers, revenue cutter service, April 17, 1895

P A Surgeon W P McIntosh detailed for duty on board for examination of officers revenue cutter service, April 17, 1895

P A Surgeon J J Kinyoun, detailed to represent Service at meeting of American Medical Association, April 25, 1895

P A Surgeon R M Woodward, to proceed to Ashtabula, Ohio, as inspector April 19, 1895

P A Surgeon C P Wertenbaker, granted leave of absence for ten days, April 16 1895

P A Surgeon B W Brown, detailed as recorder of board for physical examination of officers, revenue cutter service, April 17, 1895 Granted leave of absence for twenty days, April 23 1895

Asst Surgeon W J S Stewart, to rejoin station at Washington, D C, April 20, 1895

Asst Surgeon Emil Prochazka, to proceed to Evansville Ind, for temporary duty, April 20, 1895

Asst Surgeon A R Thomas, granted leave of absence for thirty days, April 19, 1895

LETTERS RECEIVED

Boyee J Wesley, Washington, D C Central College of Physicians and Surgeons, Indianapolis, Ind Chesman Nelson & Co, St Louis, Mo Carothers, J H Martinez, Cal Douglas B Appleton Wis Dulton, C F, Cleveland, Ohio Davis, Geo S, (2) Detroit, Mich Dunwoody, J A, Cripple Creek, Colo Eskridge, J T Denver Colo Ferguson, M B, Philadelphia, Pa, Franklin, C P, Philadelphia, Pa French, Pinckney (2) St Louis, Mo Gardner R W, New York, N Y Gallaher, Thomas J, (2) Denver, Colo Harrington J F, Westgate, Iowa Harrison, W K, Chicago, Ill, Hummel, A L (2) Philadelphia Pa Kotshorowski L Smolensk, Russia Jenkins, Ralph Washington, D C Kerr, J P Pittsburg Pa Luhring, O, La Crosse, Wis Parmele, Chas Roome Co, New York, N Y, Pettyjohn, E S, Alma, Mich Shattuck News Co Granby, Conn Sanders Enno, St Louis, Mo, Smith, Q C, Austin, Texas Truax, Chas Greene & Co Chicago, Ill Tracy J O, Brooklyn, N Y Winslow, R Baltimore Md Wilson, A C, Youngstown, Ohio

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ADDRESSES

ADDRESS ON GENERAL MEDICINE

THE MALARIAL DISORDERS OF LARGE CITIES, WITH ESPECIAL REFERENCE TO CHICAGO

Delivered at the Forty sixth Annual Meeting of the American Medical Association, held at Baltimore Md May 7-10 1895

BY WM E QUINE, M D

PROFESSOR OF THE THEORY AND PRACTICE OF MEDICINE COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO AND PRESIDENT OF THE FACULTY PRESIDENT ILLINOIS STATE BOARD OF HEALTH, ETC
CHICAGO

It is a fact of familiar observation and comment that irregular cases of malarial disorder are occasionally met with at all seasons of the year and in all localities It is equally well known that the conditions existing in large cities are inimical to the production of the malarial poison The busiest metropolitan physician sees very few examples of frank periodical malarial fever that unquestionably originated in paved and sewered portions of his city The rare cases that do occur are accounted for upon the assumption of "limited foci" of infection If an excavation for building purposes is found in the neighborhood, no matter what the season of the year, it is readily assumed that the upturning of the soil is the cause of the patient's sickness Or, if the individual has been out of the city, at any time within a period of a year or two, it is taken for granted with equal promptitude and with equal lack of knowledge of the truth, that he received the infection at that time, and that it has been sleeping or "latent" in his body ever since, and if he actually visited a region known to be malarious, even though it were several years before, the discovery of the fact is regarded as having almost the force of a demonstration of the exact time and place of intoxication And, if no recent excavation can be discovered and no absence from the city has occurred, it is nevertheless unyieldingly maintained that some subtle emanation from the soil, somewhere, must be held responsible for the result

In considering this problem it is well to include the questions of season, climate and locality Contemplate the climate of Chicago between November and March when the earth is frozen to a depth of a foot or more, a good part of the time, and also covered with frozen snow—to say nothing of macadamized pavement, when the temperature has been below zero for a month and below the freezing point for several months, when building operations have been arrested and a recent excavation can not be found anywhere, and then try to account for the malarial affections that prevail on the finest avenues and boulevards of that city during and between the months named, by assuming that there has been some subtle morbific emanation from the soil!

The country surrounding the head of Lake Michigan was intensely miasmatic before it became densely populated and comparatively well drained, and the environs of Chicago are miasmatic still Modern treatises say that the presence of malarial disorders in the region of the Great Lakes is not extensive, but is limited mainly to the vicinity of Lake St Clair and the southern shore of Lake Erie I have believed and maintained for many years that there were no such disorders in Chicago, that originated in finished portions of the city, except here and there a chance case from fresh upturnings of the soil I used to think that malarial infection was easily recognizable, except in rare instances, on the basis of a strong individuality of its symptomatology, but now I think cases are common in which no man that lives or ever has lived can make a reliable diagnosis on a basis of their external phenomena I also think that I have been seeing such cases all my life and labeling them "irregular typhoid fever" and "rheumatism" and "grippe" and "purpura hemorrhagica," or something else I used to refer to the word "malaria" as the refuge of ignorance—and it was, and is, and will continue to be used by doctors when they do not know what is the matter with their patients But when the diagnosis is supported by a microscopic demonstration it is different We can ridicule an opinion but we must make obeisance to a fact In this day, diagnosis is not always a mere matter of judgment It may be a matter of demonstration For purposes of medical literature and debate there are no cases of malarial disease in large cities and other localities regarded as non-malarious except such as have been proved by microscopic examination of the blood And yet just such cases are common in Chicago, and if they are common in Chicago, it would be surprising if they did not occur at all in Milwaukee and Detroit and Cleveland and Buffalo

It is interesting to recall the fact set forth in "Parkes' Treatise on Hygiene" that the inhabitants of the highly malarious plains of Troy, and of the extensive and pestilential marshy regions of India, are unanimous in testifying that those who drink marshy water are liable to have fevers at all times of the year, and that those who studiously avoid the use of such water are affected, if at all, only during the late summer and autumn months It is also serviceable to remember that places inherently healthful are dangerous to life by reason of their connection with the breeding places of malaria through rivers which constitute the sources of water supply for their inhabitants Aitken points out that the Upper Godavery Tract, one of the most virulently malarious regions of India, does not contain one acre of marshy ground, but its people drink the water of the Godavery River which drains more dense forest land than any river in the Empire Similar illustrations might be gathered from various parts of our own country. Professor Bemiss, of New Orleans, shows that the poison of malaria may live in water an indefinite and undetermined time, and be conveyed by currents through immense distances, even to remote islands and continents

If these statements are true, we are warranted in using the facts upon which they are based in elucidating the causes of the prevalence of palustral diseases in Chicago and, possibly, in the other lake cities named Many a marshy stream empties its waters into those of Lake Michigan The prevailing current of the lake is northward toward the Straits of Mackinaw The Calumet River which drains an extensive marshy area in the northwestern part of Indiana and the adjoining portion of Illinois empties its accumulations of organic matter into the lake three or four miles south of the "crib" or opening of the great tunnel which supplies the south division of the city with water The Chicago River also drains a marshy region and its polluted waters passing into the lake and directed northward, away from the tunnel opening just alluded to, are more likely to affect the sources of supply of other portions of the city Contrary winds, doubtless, disturb the ordinary direction of diffusion of the marsh poisons through the lake It is not to be inferred that the water used by the citizens of Chicago is inferior to that of other large cities, for there is abundant evidence that it is not, but it can not be denied that it contains the products of the marshy regions surrounding the head of Lake Michigan Nor is it to be assumed that every drop, nor even every ton of this water is thus contaminated It will be sufficient to admit that here and there a citizen gets a dose of the morbific poison in his drink This is a more rational and satisfying explanation of the midwinter origination of malarial disorders in Chicago and, possibly in other lake cities, than any supposition in favor of "limited foci" of infection which requires us to believe that frozen ground covered with frozen snow can belch forth miasm into an atmosphere whose temperature is below zero, and stock that atmosphere with living malarial organisms

In the light of these facts, I respectfully invite attention to the following clinical records which represent, in the main, the observations of Dr Frank Seward Johnson, Dr Frank Billings and the writer, covering a period of several months

Case 1—A man, aged 38 years, whose health has been undisturbed for the past fifteen or eighteen years, excepting that now and then he has had vague flitting rheumatoid pains that were strikingly influenced by changes in the weather He began to be sick in April, 1894 His sickness developed into a typical spleno-myelogenic leukemia The first blood studies were made for me by Dr W A Evans, Professor of Pathology in the College of Physicians and Surgeons, Dec 15, 1894, and during the same month the case was used as the subject of a clinical lecture The case is described in detail in the *Chicago Clinical Review* for January, 1895,—the description including a differential count of the blood corpuscles The blood contained no malarial organisms Slides preserved Again, March 11, 1895, Dr Evans examined the blood to ascertain the effects of the free administration of Fowler's solution and the glycerite of bone marrow The number of red corpuscles had increased 17 per cent and the hemoglobin gain was 8 per cent The number of leucocytes had increased to a still greater extent In December the ratio was 1 white to 65 red, and in March it was 1 to 55 The blood contained no protozoa Slides preserved

The latter part of March, 1895, the patient was admitted to the Michael Reese Hospital, and his blood was examined for malarial organisms by Dr Sievers of that institution. None were found April 1 a change in attending physicians occurred and the patient passed to the care of Dr F S. Johnson, Professor of Pathology in the Chicago Medical College A few days later Dr Johnson found the blood teeming with plasmodia,—intra corpuscular pigmented and unpigmented bodies, and free flagellated forms There is no question as to the correctness of the original diagnosis The case is not one of malarial cachexia with ague cake It is one of leukemia, and the patient became infected with "malaria" after his admission to the hospital This institution is one of the best constructed and best managed of the kind in Chicago It is located on clean sandy soil near the lake shore and there are no recent excavations to be found near it

Case 2—Mrs L, aged 56 years Residence Bowen Avenue Has lived in Chicago eighteen years She has been an invalid eight years on account of arthritis deformans, and for the past two years has not been off the bedroom floor of her residence Of late there has not been much suffering but there is almost universal destruction of the joints. There are also extensive cardio-vascular changes The urine is habitually scanty, the bowels costive, appetite, digestion and general nutrition, fair January, 1895, was called to see the lady and found her strikingly feeble, anemic, with edematous feet and ankles, and complaining of distress in her stomach Prescribed without making a systematic examination

March 24 visited her without being sent for A couple of days before I had a conversation with a medical friend on the subject of masked malarial intoxication and had become curious after more complete knowledge of my patient's condition Found her under the care of another physician and treated for "grippe" She was very ill The attendant consented to have the lady's blood examined I was informed by the gentleman who made the examination that the blood contained many intra corpuscular bodies, pigmented and unpigmented, and a few organisms that were free Nevertheless the patient died of 'grippe" a few days later

Case 3—L B, aged 6 years Residence Prairie Avenue near 50th Street The child was born in Chicago, has never been out of the city, and has been out of the house only two or three times since Christmas, 1894 General health good Domicile and surroundings wholesome March 18 the patient developed a fairly typical quotidian intermittent fever Malarial infection proved No excavation of recent date found

Case 4—Miss H, aged 16 (?) has lived in Chicago many years in a good house and neighborhood No excavations near April, 1894, she began to be sick gradually with a continued type of fever marked by irregular fluctuations, which was labeled by the attending physician, Dr Samuel Cole, "typhoid fever with malarial features" The fever continued about four weeks and then, after an interval of normal temperature lasting a few days, there was a relapse. The patient had taken quinin freely from the beginning Upon the basis of two examinations made by myself during the month of May, 1894, the diagnosis of the family physician was sustained Later the blood of the patient was examined by Dr F S Johnson and the fact of malarial infection, previously assumed to exist, was demonstrated Quinin was administered with great freedom by the mouth, rectum and hypodermatic method, and arsenic and iron were also pressed systematically, but without affecting the course of the disease The patient was seen at this time by Dr N S Davis Her illness continued over four months, uninfluenced by treatment to an important extent, and finally came to be attended with acute pulmonary tuberculosis Death occurred five or six weeks later—the blood of the patient crowded with plasmodia to the last Her sputa had been examined for bacilli repeatedly during the progress of the sickness, but none were found till 'between three and five weeks before death"

Case 5—Young lady just arrived in Chicago direct from her home in New York City Before leaving home she had an alveolar abscess which had been thoroughly drained and which was discharging freely when she arrived in Chicago She had a chill on the train, and some hours later when examined by Dr Cole showed a temperature of 103 5 degrees The abscess cavity was thoroughly and frequently irrigated with antiseptic solutions Drainage perfect A second chill occurred that night and the ensuing fever reached 105 degrees The next morning patient's temperature was normal Thorough search for pent up pus was made by the consultant, Dr L L McArthur, and none was found Dr Cole then examined the patient's blood and found i stocked with malarial organisms Quinin, administered freely by the stomach, had the effect of modifying the recurrent paroxysms of fever and of lessening the number of protozoa in the blood A violent gastro-intestinal catarrh occurred at this time which made it necessary to give the antiperiodic hypodermatically This was done, but notwithstanding the administration of 40 to 60 grains daily and the fact that the patient was kept profoundly cinchonized, the chills and fever increased in frequency and severity Some abscesses occurred in the site of subcutaneous injections Malarial infection of the blood continued till the death of the patient It seems to have originated in New York City

(Cases 6 to 8 inclusive, occurred in the practice of Prof Frank Billings)

Case 6 —M W , a boy aged 10 years Residence Drexel Boulevard Family history good The boy has never been seriously sick At home he uses Waukesha water but at school he drinks hydrant water About Dec 1, 1894, the boy, seeming to be quite well, had two primary incisor teeth extracted Continuous hemorrhage resulted which was checked with difficulty December 5, epistaxis began which finally required plugging of the anterior and posterior nares for its arrest Between December 4 and 14, numerous points of subcutaneous hemorrhage appeared, together with a sub conjunctival extravasation The child was now exsanguinated, weak, restless, of normal temperature, and exhibited a pulse rate of 120 Spleen not palpable Liver area normal December 14 the blood was found to contain both intra corpuscular and free, malarial organisms Quinin and Fowler's solution were prescribed and the patient improved steadily December 16 the spleen was found to be palpably enlarged and there was a slight rise in temperature Small nasal hemorrhages occurred on two or three later occasions but the boy was fully restored within a month The patient was seen in consultation with the family physician, Dr E O F Roler The case simulated purpura hemorrhagica and it appears certain that the information furnished by the blood examination resulted in the saving of life

Case 7 —J O B , a laborer, aged 49 has lived in Chicago fifteen years and has not been out of the city any important length during this period Admitted to Mercy Hospital Sept 30, 1894 Has had irregular bowels all his life, and more or less dyspepsia the last five years Eight years ago he had severe attacks of biliary colic and four years ago he broke his right leg near the ankle Some deformity has resulted, the skin covering which is red and scaly About six months ago he noticed bluish-black discolorations between the knee and ankle, which, subsequently, became yellow and itchy Still later, similar spots appeared on the thighs, and extended until they discolored the whole integument of the lower extremities Where he had scratched the skin it had become inflamed, and a sticky discharge issued from it On admission his liver and spleen were found to be somewhat enlarged , his urine was normal , and the lymphatics of the groins, axillæ and neck were increased in size His morning temperature ranged from 98 to 99 4 degrees and his evening temperature between 100 to 102 2 degrees Originally the case was regarded and treated as one of eczema December 2 a blood examination was made and large numbers of malarial organisms were found free and intra corpuscular Quinin and arsenic were prescribed, together with an occasional purgative , and the patient improved rapidly He left the hospital convalescent, Jan 8, 1895 At that time his spleen was still palpable but much diminished in size The purpuric eczema was well On his way home he became chilled and the next day was seized with severe colicky diarrhea which continued till he returned to the hospital, completely exhausted, January 21 At this time the blood examination was negative as to malarial organisms The patient died three days later The autopsy, confined to the abdomen, revealed ulcerative enteritis, a chronic splenic tumor and sclerosis of the liver

Case 8 —Mrs F S S , aged 36, formerly lived in the southern part of Indiana and suffered from malarial fevers, but for two years past has lived in Minneapolis Minn , and has had good health She still visits her old home occasionally During the latter part of October, 1894, she was suddenly seized with severe pain in the epigastrium which radiated toward the right hypochondrium and was especially severe in the region of the gall bladder The pain was attended with nausea and vomiting and was so intense that it required large doses of morphin, hypodermatically, to subdue it, It recurred daily but at irregular hours, for two weeks It suddenly shifted to the region of the right kidney but continued with unabated violence at irregular times till about the middle of December The first diagnosis was biliary colic and the second renal colic An exploratory operation was under consideration The urine was scanty and the twenty-four hours' urea was about half the normal quantity , but no abnormal ingredients were present A blood examination made Jan 4, 1895, discovered a considerable number of intra-corpuscular malarial parasites The free use of quinin was attended with immediate improvement and at the end of six weeks the patient returned home entirely recovered Much of the time consumed in the treatment was required to overcome the effects of the long continued and free use of morphin Here a correct diagnosis saved the patient from a severe operation

(Cases 9 to 13, inclusive, occurred in the practice of Dr F S Johnson)

Case 9 —Mrs F was seen a week after normal confinement She had much headache, a little fever and an irregular lochial discharge which was profuse and bloody every afternoon Pulse 90 to 100 and temperature 99 to 100 degrees Blood contained many endoglobular and a few free bodies Under the usual treatment symptoms promptly ceased

Case 10 —March, 1895 Mrs C , aged 55, has lived in Chicags forty years and in her present home fifteen years , and has not been out of the city in three years There are no excavations in the neighborhood The patient was perfectly well till early in January At that time, upon awakening one morning, she found her feet red, swollen and painful and her left arm and leg numb and weak The paresthesiæ have continued but have been inconstant as to intensity and location—absent at times and now limited to one side and then to the other The redness and swelling of the feet disappeared in twenty four hours to be followed by a crop of raised, infiltrated, tender erythematous spots, varying in size from that of a silver quarter dollar to that of a five cent piece, which lasted several days and left blood stains Successive crops have appeared at irregular intervals, and the individual spots show all stages of development and decline Five days after the onset of the sickness the patient developed a tertian intermittent fever , but this has not seemed to make any impression on the rheumatoid phenomena or the erythematous nodes Spleen enlarged bowels torpid , tongue coated skin anemic and sallow Examination of the blood discovered small endoglobular bodies and large amœboid endoglobular bodies containing pigmented particles in active motion Under anti malarial treatment the rheumatoid pains disappeared , the erythematous nodes continued but were lessened in number , but the chills and fever were not benefited At the end of three weeks of such experience the patient decided to "quit doctoring" A noteworthy feature of the case is the varying persistence of its different features

Case 11 —February, 1895 Mrs M , aged 27, was chilled by the weather the night she left New York City, and on arriving in Chicago she had high fever, severe headache and general pains All symptoms except the headache disappeared in two days under the use of salicylate of sodium and a laxative , but the headache persisted The blood contained many plasmodia Quinin, grs x, was administered, and the headache ceased within twenty-four hours Two days later the patient called attention to a circumscribed edematous redness on the front surface of both ankles and over the left inner malleolus Treatment continued, and in a day or two the lady was well enough to resume travel Infection seems to have occurred in New York City

Case 12 —January, 1895 Mrs M , aged 55, has not been out of the city for many years General health good Last two weeks has had headache, backache, post-sternal pain and a little cough, and has been getting pale and weak Each morning at about 11 o'clock she has slight chilly sensations followed by about two hours of fever and this by sweating Diagnosis based on blood examination Anti-malarial treatment was slowly successful

Case 13 —May 2, 1895 Infant born about Nov 1, 1894 Suckled by a hired nurse Thrived till it was three months old Since that time it has been having an irregular diarrhea and has gained none in weight No fever On careful inquiry it was learned that the nurse had been ailing a little An examination of her blood showed malarial infection Examination of the infant's blood revealed numerous large and a few small endoglobular bodies The intestinal disturbance abated instantly upon substituting sterilized cow's milk for the nurse's milk and the blood infection disappeared promptly under the usual treatment

The foregoing cases have been selected from a total of forty-five which, with very few exceptions, have occurred since November, 1894 Without the cooperation of the gentlemen named I would not had sufficient cases for this communication The interesting cases occurred in their practice Those cited have been selected because they present certain striking facts bearing upon the questions of the source of infection, the diagnosis, and the limitations of the curative powers of our best anti-malarial medicines Of the total number, thirty unquestionably originated in Chicago between December and May and, leaving out two or three, they originated in a choice and densely populated portion of the south division It is impossible to say how many cases have been overlooked Blood examination was confined to suspicious or confusing ailments Similar cases are, doubtless, quite as common in other parts of the city, but I know of no observations which establish the fact The exact source of infection is a matter of conjecture There may be those who can conceive of protozoa disporting themselves on the lake shore of Chicago in December or January without a stitch of clothes on, in an atmosphere that is 10 degrees below zero, but it is easier to believe that the malarial organisms, like other protozoa, live in the water and obtain entrance to the human body by being swallowed This is not intended as a denial of the possibility, nor even of the likelihood, that marsh air may be laden with them, especially the night and early morning air containing an abundance of moisture Indeed, if it be true, as stated by H Gilman Thompson, that they have actually been discovered in the air, there is no ground for further controversy But so far as known every vital phenomenon manifested by these parasites requires the presence of water, and Bartley, of Brooklyn, N Y, has demonstrated that they exist in the common source of water supply of that city—a fact that is likely to direct investigation into like channels in relation to other cities The proofs of water infection are quite as strong as those of air infection, and there is not a doubt that impure water is responsible for the occurrence of paludal disease with immensely greater frequency than is generally known We have been beguiled by the belief that such diseases do not originate in large cities and especially in the dead of winter, but there is good reason to suspect that they are a more common cause of death in these places than has been supposed, and that the "masked" or atypical forms which are very common are rarely identified As to their rate of prevalence, beyond the primary fact that physicians of active practice meet with one or two cases per week in Chicago we have no knowledge, but we are free to assume that the malarial organism has no better life prospects in the middle of a severe winter than it has at other seasons of the year, and is no more likely to get into the human body Most of the cases met have been of the "masked" variety, and, from the standpoint of external phenomena, have not been recognizable as examples of malarial infection Some have been easily identified on the basis of the periodicity of their symptoms—neuralgic or febrile Cases strongly simulating pernicious anemia, rheumatism, grippe, erythema nodosum, pyemia, puerperal infection, purpura hemorrhagica, biliary and renal colic, chronic eczema and digestive derangements, are herein recorded, in which it would seem impossible to reach a correct conclusion without a careful examination of the blood In a few of the cases it appears probable that the demonstrated malarial infection was an incident and not the cause of the various morbid phenomena described

Examples of a mild grade of temporary infection in which the health of the individual is but little disturbed are very common In eight cases pulmonary tuberculosis and malarial toxemia co-existed—an impressive fact suggesting the idea that the diminished powers of resistance occasioned by one, predisposes to the other In less than half the number a history of periodicity was elicited, but in most of these it required close questioning and observation to do so. The absence or presence of this feature is not safe ground for differential diagnosis Distinction must be made between true periodicity and the erratic appearance and disappearance of symptoms or of fluctuations in their severity The entire absence of fever—a characteristic of many cases—would be enough to obviate suspicion on the part of city doctors, especially in the winter season of northern latitudes, that the case in hand may be one of paludal intoxication Nor is the therapeutic test a reliable guide to diagnosis The failure of quinin to arrest febrile or other symptoms of disease is considered by many a demonstration that such disease is non-malarial This assumption is not correct A patient whose blood is teeming with hematozoa may be profoundly cinchonized for weeks and then die with an undiminished number of parasites in his circulation In other cases, as every one knows, the medicine is instantly efficacious These observations strongly support the conclusions of Golgi, Baccelli and others that under the one name are included separate and distinct varieties of microorganism Quinin causes some symptoms to disappear while others persist, and those showing periodicity may be the ones to persist Moreover, blood infection may continue after objective phenomena have ceased, but this is not usual It is quite plain therefore that malarial disorders are of common occurrence in which it is impossible to say with any certainty of correctness, either upon the basis of the external phenomena or upon that of the action of quinin, whether or not the case in hand is of malarial origin and nature

The active prevalence of such disorders in a city not known as a breeding place of their specific cause, and the facility with which they may be confounded with other kinds of disease, warrant the suspicion that in all large cities not more favorably situated, thousands of cases occur every year and escape recognition In this connection some pointed questions can be asked as to the soundness of the prevailing opinions concerning the incubative period of these disorders. The duration of this period as stated by authoritative writers is extremely indefinite It varies between a few minutes and several years If the meaning of the term is limited to the time intervening between the reception of the hematozoon and the outbreak of a periodical fever, the indefiniteness of statement referred to is fully warranted, for, inasmuch as no outbreak of fever may occur at all, the patient may die while the germ is still sluggishly incubating Conceive, if you can, of an infection of the human blood breeding and destroying for months or years before it makes its presence known Name, if you can, any other infection that behaves in this manner Yet this is the teaching of the day Flint says that the incubative period may last as long as four years, and W H Daly in a recent essay quotes an unnamed writer as saying that it may last seventeen years! Now is there any proof whatever that any such thing ever happened or is possible? It is said by writers—by Thompson in 'An American Text-book of the Theory and Practice of Medicine," for example, that during the incubative period the patient may be in comparative health Who knows this to be true and how did he learn it? Who has ever known of a case of demonstrated malarial infection lasting thirty days during which time the patient was in undisturbed health? It is not a question of opinion but a question of fact Who knows?

It is well known that there are great differences between individuals in respect to the quantity of infectious matter required to make them sick It is also true, as I have witnessed twice within a month, that a child or an adult may show a few malarial organisms in the blood to day and not one a few days later And this, without a dose of medicine At the time of infection there were no evidences of sickness—certainly none so distinctly marked as to be recognizable as elements of a fixed disease But suppose the parasites had triumphed over the blood corpuscles and feeding upon the hemoglobin, and multiplying, how many years would it take the man to discover that something was wrong? In view of what is known of water infection and suspected in relation to ice, milk and food infection, in view of the activity with which malarial disorders are known to originate in Chicago and reasonably suspected of originating in other large cities, is any one willing to stand before this body and say that malaria can incubate seventeen years, or four years, or three months, without showing any results? Suppose a citizen had visited a malarious region in the South for a few days or weeks a couple of years ago and returned to Chicago in undisturbed health, suppose he continued in perfect health till last December and then came down with a malarial fever, is that proof that he got the infection in the South? By no means During the same period of time probably thousands of citizens who had not been out of the city at all were similarly taken sick Yet this is the kind of evidence—utterly and absolutely worthless as it is—upon which the incubative period of malarial disorders is estimated In the light of the revelations of Laveran we must, till reasonable proof to the contrary is furnished, regard every case of prolonged "latent" infection as an example where the individual did not get infected when he had a good chance, but did get infected in a locality that is not known to be, and yet is, a breeding place of malarial diseases

The same considerations must be applied to the elucidation of the question of relapses A person who has had intermittent fever and recovered perfectly may exhibit in the diseases of later life an impress of periodicity without having at the time any malarial infection whatever In recurrent true malarial fevers it may not be easy to differentiate between relapses and new infections, but we may investigate and eventually be able to answer the question Suppose a citizen of Chicago had ague, recovered, remained in perfect health a year and then had another attack of ague, is this a relapse? The affirmative would represent prevailing opinion, but is there any proof that prevailing opinion is correct? If the same person had had two attacks of pneumonia or typhoid fever a year apart, who would designate the second one a "relapse?" Nobody There is not a vestige of proof, so far as I know, that a person ever had continuous malarial infection a year without being sick in some way If by the term "relapse," is meant repeated outbreaks of fever during the course of continuous infection—the patient being sick with other derangements caused by the infection every day of the time—the inference is different from that given to it in relation to other kinds of disease All our literature on the etiology of malarial diseases must be revised and put in accord with existing facts I offer no apology for discoursing upon a subject with which many of you are vastly more familiar than myself, for familiarity breeds indifference, lack of thoroughness and a thoughtless readiness to take things for granted, and it needs to be made to stop and think now and then The fact that the germs of malaria are often conveyed into the body by other media than the air and that in a vast but undetermined percentage of cases infection is preventable, is one of the most important and imperious before us today It makes the duty of the doctor plain We grow enthusiastic in contemplating the possibilities of the antitoxins, and we take off our hats to the great army of investigators who, despite the opposition of well meaning philanthropists, "will persist in destroying a few dogs and guinea pigs in order that they may teach us how to save babies," by throttling infection the instant it invades the human sanctuary, but still, after all, prevention is a still higher aim, and it is the chief glory of our profession that its best minds and purest hearts are ceaselessly active in this direction

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ADDRESS

Before the Graduating Class of the Wisconsin College of Physicians and Surgeons, April 16, 1895

BY U O B WINGATE, M D
PROFESSOR OF DISEASES OF THE NERVOUS SYSTEM AND HYGIENE
MILWAUKEE

It has sometimes seemed to me that an address on occasions like this, smacked somewhat like a dish of dessert at the end of a banquet, when every one had partaken of more than enough

I am sure that the students in the college have had their fill, I can not conceive that the Faculty are hungry for any words from one of their number, and I have grave doubts about any of the friends present being in possession of a keen relish for anything oratorical at this time However, we seem to be victims of custom's decree, but I promise not to weary you long

The Wisconsin College of Physicians and Surgeons has completed the second year's work of its existence, a work that speaks for itself and needs no encomiums from me It prides itself on having earnest, faithful and conscientious teachers, students in liberal numbers, zealous in the prosecution of their studies, and it congratulates itself on taking a position in the front ranks among the younger members of American Medical Colleges It is the purpose of its Board of Directors and Faculty to maintain the stand it has taken, to advance from year to year, and to convince the public, and the medical world as well, by its works alone It proposes to stand on its own foundation which has been carefully constructed, and it has no fears about its firm and lasting superstructure

To lay such a foundation and build such a structure thereon, means much hard and self-sacrificing labor, but its promoters have practiced their profession long enough to fully realize this, and they are embued with a spirit of enterprise fully adequate to the undertaking, and feel confident that the results of such efforts will merit the commendation of a grateful public

The great State of Wisconsin with its 2,000,000 population and rapidly increasing growth will never fail to welcome educational institutions that have engraved on their banner, "a higher scientific education," and an institution with such ideals, with a firm and steadfast purpose of its governing body, can not fail to meet with the popular approbation of our best citizens

Gentlemen of the graduating class It becomes my pleasant duty on behalf of the Faculty of this College, to bid you a cordial welcome into the ranks of one of the noblest, as well as one of the most ancient, of the professions that have been vouchsafed to man Your first duty, then, is to always keep its sacred precepts before you and forever endeavor, to the utmost of your ability, to maintain its dignified and venerable character This duty well performed, all other appropriate things will follow in proper order

I should, perhaps, be unfaithful to my methods of teaching if I did not give you, at this time, a few words of warning relative to your own physical and mental welfare in undertaking the arduous labors inseparable from a physician's life Statistics show that among all professional lives that of the physician is the shortest, and the reason for this physicians know full well The demands upon your strength, both mental and physical, are far greater than in any other calling with which I am acquainted, but remember that it is not the hard mental or physical labor that kills, but the friction caused by irregular hours of rest and food, worry, disappointment in life, and the constant strain on the nervous system, so hard to regulate in the practice of medicine Permit me, then, to counsel you to early attain as regular habits as possible, and demand for yourselves sufficient rest, else you will find yourself, all too soon, in the position of "the blind leading the blind"

The nerve force generated in your systems, you know full well, is only capable of accomplishing about so much, and what is expended in one direction will fall short in proportion in another direction This was never better illustrated than in our modern times when we see so many falling by the wayside from troubles resulting from the strain, worry, and irregularities of the times in which we live, and you, as counselors of the people's health, should be the first to recognize the danger

Let me counsel you to observe, with a scientific eye, what has been termed "the physical stigmata of degeneracy" of the present time, so well illustrated by the flood of printed matter that robs students of food and peace of mind I refer more especially to that literature that treats of sudden reforms and pseudo-organized methods promulgated by pseudo-organized individuals "scarce half made up," and the idle clatter they make from time to time through the agency of printer's ink You will find this, more or less, in all of the literature of the day, in the morning, evening, and Sunday papers, magazines, books, medical periodicals, scientific journals, in fact in all literature Permit me to counsel you to judge them always from strictly anatomic, physiologic and pathologic grounds, aided by chemistry, and such other recognized sciences as you can depend upon Your usefulness in life will depend largely upon the care and discrimination with which you treat and consider these matters

Let me warn you that intelligent people are fast learning to recognize that the physician who boasts of treating thirty or forty patients in a period when he should treat but ten, even if his boast be true, is not doing his full duty to those who have intrusted their lives to his care, any more than an artisan can rush through with a piece of work, and do it properly in half the time required to do it well The older I grow and the more I observe, convinces me that the ideal successful life is not attained by a short, spasmodic though brilliant career, so much as by the long steady pull and the attainment of a full rounded out existence intended by the Creator of our being To attain this, one must begin early and learn the great lesson of the earliest writers, so aptly expressed by Pope "Know thyself, presume not God to scan The proper study of mankind is man" Having fortified yourself with a complete knowledge and absolute control of self, you will be enabled to go forth and exercise your important function in life Gentlemen, this is the first principle! A college life is only intended, indeed it can only expect, to teach first principles Your diploma is only an emblem of first principles and represents but an entering wedge into future knowledge In other words, so often repeated, it is but the introduction into student life

The profession of medicine is a progressive work You have to deal with human life that is of itself progressive, evolving, revolving There is no profession that demands a more discriminating conservatism, and at the same time wholesome progressiveness so much as the one you are entering You must always maintain a strong, healthy, physical, mental, and moral character, for upon your efforts may depend not only the life and happiness of a family, but the life, prosperity, and greatness of a nation—a world

Whatever your impressions may have been concerning your college course, there is one thing that now must forever stand foremost in your mind's eye, that of responsibility Heretofore you have left responsibility to your teachers, now you enter a realm where you must share that responsibility yourselves

It is interesting to one who has been a student and teacher in a medical college, to watch the changes that take place in a medical student from the time he enters college to the time of his graduation, providing he proves himself entitled to graduation I have passed through all of their gradations Contemplate the green, hilarious first-year man Inclined to destroy all with which he comes in contact Seats in the college are marred and broken, together with windows, doors, blackboards, and it seems to the teacher that his whole intent in life is destruction He may, under certain circumstances, if there are no other provisions, even rob graveyards of their legitimate occupants But observe the change that comes over him in his third and fourth year of study, under conscientious and faithful preceptorship, how he changes his destructive characteristics He becomes an interesting, pleasant personality to his preceptor He is earnest and painstaking in all that pertains to reality in life He may caution the students in the first and second years against their destructive proclivities, and tell them they ought not to do so He is inclined to treat his preceptor with a higher degree of respect than ever before He takes more interest during the lecture hours, and as he advances to the final examination, before he enters the sacred duties of the medical profession for life, he may show to his preceptor that he still proposes to rob grave yards, but in a far different sense ffom that in which he began his work He proposes to snatch from the grave, so far as the armamentarium of medical science will permit, the devoted husband and father, the tender wife and mother, the lovely bud of childhood, the brother, the sister, the all that is sacred to the human heart He does not hesitate to use his anatomic knowledge for the benefit of justice in disclosing crime and wickedness in the dissecting or autopsy room and on the witness stand, regardless of the unjust criticism that frequently follows Gentlemen, you must be patient It is a part of your education to bear the darts that fly thick and fast, at times, about you You must also bear with the inconsistencies of life, the deprivations of comfort and happiness, and seek satisfaction in the inward feeling, which you must try to develop at all times, that you have done your duty Duty well performed is always sure of its reward, and the science of medicine, your chosen profession, a science that is linked with all other true sciences has nothing to fear, and you, as its true disciples, I am confident will never flinch from duty

Remember, that while the practice of your profession is markedly different from what it was a century ago, your duties are none the less sacred nor your responsibilities none the less heavy, neither will they be while love kindles the fire of the noblest aspirations of human life, thought clothed with divine majesty scans the pages of the history of life and death, and science with its piercing light penetrates into the darkness of the unknown and reveals the truth

LECTURES

LECTURES ON INTRACRANIAL SURGERY

IX —THE OPERATIVE TREATMENT OF IDIOCY

BY EMORY LANPHEAR, M.D , Ph D

ST LOUIS, MO

It is with a feeling of diffidence that I take up the subject of the surgical treatment of idiocy, for I am uncertain as to the advisability of such measures, yet as medical literature, some two years ago, was glowing with accounts of wonderful results obtained, and periodicals of to day contain articles condemning the plan as unscientific and valueless, the subject deserves more than passing notice

HISTORY OF THE OPERATION

The proposition to relieve idiocy by operation originated in America Dr William Fuller, of Grand Rapids, Mich , who was at the time Professor of Anatomy in the Medical College of Montreal, Canada, at a meeting of the Montreal Medical Society, in 1878, read a paper upon the subject, with the report of a case operated upon by himself Moreover, Louis Bauer, M D , M R C S , Eng , the distinguished Honorary Professor of Surgery in the Marion Sims College of Medicine, of St Louis, operated for microcephalus at the St Louis City Hospital in 1871 The microcephalus was of the acquired variety, accompanied by petit mal, as well as the convulsive form of epilepsy (sometimes as many as twenty spasms in twenty-four hours) Dr Bauer claimed that the cerebral trouble was due to premature ossification of the cranial sutures and so removed a large segment of the skull for the purpose of giving space for growth of brain Recovery from the operation was speedy, and the boy disappeared Five years later the patient when seen by Dr Bauer was so changed in physical and intellectual condition as not to be recognized He is now the proprietor of a general store in Arkansas and is a successful business man So far as I can learn this was the first operation ever made for microcephalus, and although the object was relief from epileptic seizures, and not for the cure of idiocy, it can scarcely be denied that to St Louis belongs priority in operation for microcephalia

Scarcely any attention was paid to the essay of Dr Fuller, except a few condemnatory comments and the subject remained in quiescence until 1890, when Lannelongue, of Paris, startled the medical world by boldly declaring that for the unfortunate idiot relief had been found in operation, as demonstrated in a large number of cases Following the publication of his report many operators in Europe and America hastened to open the skulls of microcephalics and to rush into print almost before the wounds were healed Happily the "epidemic" is over and we can now view the results dispassionately As no recent articles have been published giving reports of progress, I shall base my remarks chiefly upon my own cases

My experimental work in the operative treatment of idiocy has consisted of twelve operations, covering all classes of idiots in which there is even a faint possibility for improvement While my cases are, perhaps, more numerous than any other American operator's, they do not approach Lannelongue's reports either in number or brilliant results, at the same time, the cases are not, like his, limited to microcephaly alone, and hence are perhaps of more value in a general way

VARIETIES OF IDIOCY

All idiots may be classed under the heads 1, congenital, 2, microcephalic, 3, eclamptic, 4, epileptic, 5, hydrocephalic, 6, paralytic, 7, cretinic, 8, traumatic, 9, inflammatory They all have something in common, thus, in addition to the mental trouble many are deaf mutes, or are blind, and anesthesia as well as anosmia may be present, some learn to walk late, or not at all, and most of them have a shambling gait, which in the cases of microcephalia, closely resembles that of the anthropoid apes, a general restlessness, vacant stare, thick and everted lips, etc Altogether the proper classification is rather difficult, but the following distinctions should be noted

1 In congenital, or genetous idiocy, the subject is often dwarfish, deformities are numerous, particularly a high vaulted palate, with teeth irregular and decayed, deficient growth of nails, eyes rolling or squinting, mental condition a total blank

2 In microcephalic idiocy the head is small, but the physical defects are less marked than in the genetous form, there is some tendency to learn some

things, and as the subjects grow older they improve under training and present more physical and mental energy than is found in other classes There are two varieties *a*, congenital, in which the mental weakness is due to agenesis of brain structure, the synostosis being secondary to the cerebral defect, *b*, acquired, in which the brain has begun development but the bones, for some reason, too suddenly unite and cease to grow, with a consequent cessation of cerebral development or even retrogression, until the child from being more or less intelligent becomes a complete idiot

3 Eclamptic idiocy succeeds infantile convulsions As the child develops, although there may be little trouble with motion or sensation, it is found that it is capable of acquiring very little education

4 In the epileptic form the child may have been primarily well equipped mentally, but after the destructive paroxysms appear there is more or less marked deterioration, later on, if anything be learned in the interval between epileptic seizures, a new attack erases it from the memory Such patients are apt to appear to be on the boundary between imbecility and insanity

5 Hydrocephalic idiots present the usual signs of hydrocephalus Some cases are due to porencephalia (ventricular dropsy, with more or less complete absence of the upper part of the hemispheres) while others depend upon dropsy of the arachnoid Albers, of Bonn, makes this distinction mental obtuseness and paralysis indicate effusion into the ventricles, while restlessness and mental derangement point to fluid in the sac of the arachnoid

6 In paralytic idiocy the patients are tractable and docile, but the same destructive lesion that renders the patients completely paralyzed affects the centers of intellect—hence they are hopeless

7 Cretinism is a form of idiocy quite rare in America, but very abundant in certain parts of the world (Switzerland especially) where the condition of soil, air, water, etc, give origin to it After the sixth month the condition is readily recognizable bodily development is very slow, the baby, though weak, is remarkably fat and appears swollen, the skin is often dusky, or yellow, but sometimes natural in color, the head large, and fontanelles wide, with sutures sometimes disjointed, the expression stupid, appetite voracious, belly swollen immensely, neck thick, but the extremities attenuated Later, teething is not completed for many years, but is accompanied with offensive salivation and convulsions, the child does not learn to stand before the sixth year, about the seventh year it begins to make a few articulate sounds in a hoarse but shrill voice, with great difficulty in speaking The disproportionately large feet, attenuated legs, swollen belly, cumbrously large head drooping over, an illy developed thorax—these are unmistakable

8 Traumatic idiocy usually may be traced to injuries by attempts at abortion or by use of obstetrical forceps In degree the mental impairment may be severe or trifling, and in continuance either temporary or permanent

9 Inflammatory idiocy is that form which follows attacks of so called "brain fever"—meningitis with more or less exudate

Low grade imbeciles differ very little from the congenital idiots, except in extent of mental development, they think, feel and speak, and can be taught some simple things

WHEN OPERATION MAY BE DONE

The earlier in life the operation can be done the better, certainly it is not probable that any benefit can be expected in idiots of more than 8 or 9 years of age Nor are all idiots fit subjects for this experimental operation Congenital idiocy may possibly be improved through the increased flow of blood set up by the operation Microcephalic idiocy offers decidedly the best field, especially in the form which Binnie (*Kansas City Medical Index*, May, 1891) has termed "acquired microcephalus" It is scarcely justifiable in pure eclamptic idiocy In epileptic idiocy there may be a chance for improvement in some cases In hydrocephalic idiocy, tapping the ventricles and establishing permanent drainage may perhaps do good in the first group, but better results are to be anticipated in the second class (arachnoidean hydrops) In traumatic idiocy,nearly as much can be expected as in traumatic epilepsy or insanity In inflammatory idiocy, operation is certainly inadvisable No operation is justifiable in cretinism, the prospects of improvement from the use of thyroid extract seem to be very bright indeed, and this line of treatment should be further investigated

PRELIMINARY TREATMENT

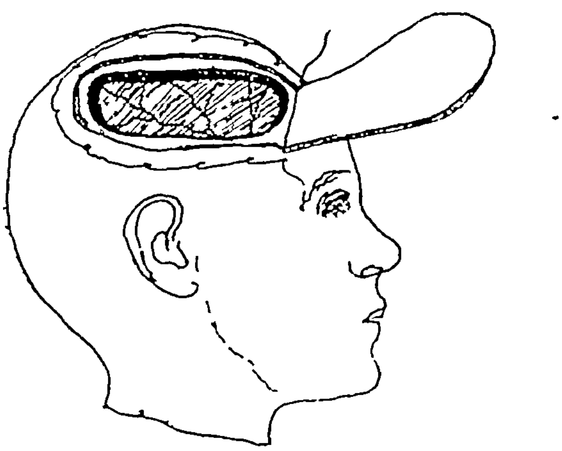
On the day before the operation the patient is chloroformed, and the head carefully shaved The whole scalp is scrubbed thoroughly with soap and water, dried carefully, washed with sulphuric ether, again subjected to soap and water, and finally douched with a solution of bichlorid of mercury of the strength of 1 to 1000 The head is then enveloped in bichlorid gauze, held in place by a bandage

PREPARATION FOR OPERATION

The child being put completely under the influence of chloroform (ether never being employed, since it causes too much congestion of the field of operation), the dressings are removed from the head and the scalp scrubbed with a saturated solution of permanganate of potassium, followed by a saturated solution of oxalic acid, it is then rinsed with bichlorid solution, and the head wrapped in towels wrung from the same This is the last use of any antiseptic solution in the operation, as plain hot water, previously boiled, must be employed for irrigation and for wetting the "sponges," which are not sponges at all, but balls of iodoform gauze which will be thrown away as soon as used Every instrument must have been boiled for twenty minutes immediately before using, and the hands of operator and assistant must be carefully disinfected by washing in the solutions used upon the head These apparently trivial details in asepsis may seem superfluous to those who have seen excellent results in the work of men who are absolutely *dirty* in their methods, but if a surgeon expects to maintain a low mortality rate, especially in cerebral surgery, the closest attention must be paid to the most minute points of possible contamination Being, therefore, certain that everything is in perfect readiness, the preliminary suturing may be done Beginning at the median line, just at the margin of the hairy scalp, a suture of strong silk is introduced, stitches of about three-fourths of an inch being taken, the line of suture is carried backward to a point near the occipital protuberance, then turned toward the side and brought down to near the level of the ear, and thence carried forward to within some two inches of the point of beginning By this preliminary stitching, the bleeding may be controlled far better than by an Esmarch bandage passed around the head This step is perhaps the most important in the whole operation, because every drachm of blood lost will weigh against the recovery of the little patient Children stand the loss of blood poorly, and I am sure that many cases have been lost on account of want of attention to hemorrhage The condition which is called "shock," so frequently met after operations on the head, may, in most cases, be ascribed to loss of blood

THE OPERATION

The field of operation having been thus entirely surrounded, a large flap in the shape of a horseshoe, with its base forward, is quickly cut (with a single stroke of the scalpel clear to the bone) and raised In the flap the pericranium is included, at the sutures there are some adhesions, but these are readily freed by the handle of the knife The bleeding points, few in number, are seized with hemostatic forceps, and the flap enveloped in bichlorid gauze wrung out of hot water Hemorrhage having been completely checked, an attempt should be made to go through the skull with the sharp gouge, which is preferable to the mallet and chisel and to the trephine whenever the bone is soft and thin enough to permit I have seen disastrous results from the use of the trephine, and have myself lost one patient under circumstances that seem to point to the use of the mallet and chisel But if the bone is too hard for the gouge, a half-inch trephine is brought into use, and a button removed in the usual manner The opening must now be enlarged For the purpose, Parkhill's new craniotomy forceps answer admirably, as do also Keen's The opening is, by means of these forceps, rapidly extended forward until it measures at least four or five inches in length and from an inch and a half to two and a half in width, its anterior margin being as near as possible to the border of the hairy scalp, it thus exposes a considerable portion of the frontal convolutions, as well as a part of the motor area If one is very careful, there should be no wounding of the vessels of the meninges, but if inadvertently injured, a needle, armed with fine juniper-oil catgut, must be inserted through the dura, carried under the vessel, and brought out a line or more beyond, and the gut tied—thus ligating *en masse* The edges of the hole are now smoothed by a small rougeur, and the fragments of bone carefully washed away The appearance of the wound is now as shown in illustration



At this point the sutures surrounding the site of operation are removed, and bleeding vessels caught and tied While the wound is being irrigated the flap is uncovered and washed The whole field is now dried and covered with iodoform, the flap replaced and stitched with a continuous suture of medium size A few strands of gut are inserted at the lower angle of the wound and pushed well up beneath the flap to insure drainage The enveloping towels are now removed, the scalp washed and dried, the wound hidden by powdered iodoform, and dressed by using a considerable quantity of iodoform gauze next to the head, then a larger quantity of bichlorid gauze, then cotton and a bandage As thus performed, the operation can be completed in less than thirty-five minutes

AFTER TREATMENT

The child is now put to bed and treated as if suffering from any other wound Usually there is very little trouble after the operation Most of the cases I have operated on have been able to sit up in bed the following day, and some have gone on in their little play in a few hours, as if nothing had happened This first dressing is allowed to remain until the seventh or eighth day, unless some special reason exists for its earlier removal At the end of a week, primary union will be found to have occurred, and the dressings are to be replaced by a close fitting head-dress of bichlorid gauze cotton and bandage, which is to remain until the time for the second operation This will be in two or three weeks, according to the condition of the patient The child is then chloroformed, the dressings removed, and the scalp again shaved and washed with soap and water, ether and bichlorid solution It is not, however, necessary to do this on the day preceding the operation, as in the first instance, because the scalp is still in an aseptic condition from the first operation

The second operation is precisely similar to the first, save that it is made on the opposite side of the head One week after the operation, if everything has gone well, the permanent dressing may be put on and the child allowed to go out, so that the total period of stay in the hospital need not exceed four weeks, and one may be able to cut it down to three

It will be noticed that my mode of treating these cases by a large oval opening, differs considerably from Lannelongue's operation, which has been practiced by most American surgeons, notably Keen and Wyeth, and which consists of a large, long flap made in the shape of a U, V, or T, the dura being opened only when there are evidences of pachymeningitis, but I have seen the opening close up within a few weeks in the Lannelongue operation, with return of all the bad symptoms for which the craniotomy had been made In none of my cases has this occurred, and I believe the larger opening affords more room for improvement

Consideration of the very important question of "*What Are the Results?*" with a report of cases, must be deferred until the next lecture

(*To be continued.*)

Malpighi's Memory in Japan —A recent number of the *Sei-I-Kwai* medical journal records a bicentenary celebration held by the Tokya Microscopical Society in honor of Marcella Malpighi, the anatomist of Bologna, who was the first to describe the minute anatomy of the kidneys and other organs in 1694

ORIGINAL ARTICLES

THE PROCESS OF FORCED DILATATION WITH IMPACTED NEBULA

AUXILIARY TO THE MEDICAL AND SURGICAL TREATMENT OF THE EARS, NOSE, THROAT AND CHEST, WITH ILLUSTRATIONS OF PORTABLE APPARATUS SOME SUGGESTION TO GENERAL PRACTITIONERS AS TO THE SELECTION OF MEDICINAL AGENTS AND AS TO MEASURES FOR CONTROLLING PULMONARY DISEASES

BY GEORGE F HAWLEY, M D
CHICAGO

Through new discoveries and improved methods for preventing diseases and restoring health, the general and special practice of medicine and surgery is gradually becoming a practical if not a positive science

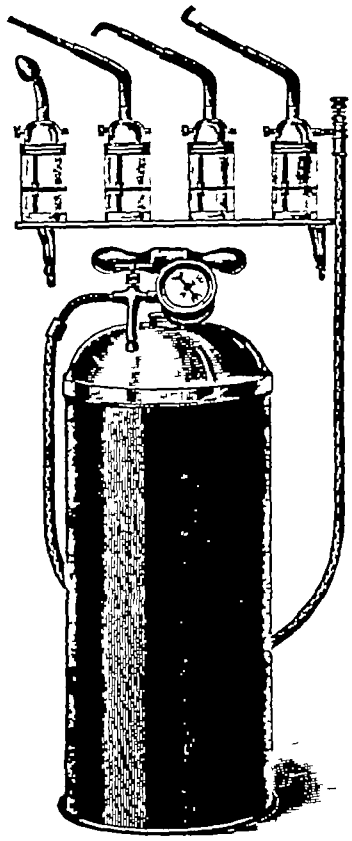
While marked progress has been made all along the lines of general, and in some lines of special practice, it is a lamentable fact that there have been but few improvements in the facilities, and none in the methods, of treating diseases of the air passages locally, for the past ten or fifteen years, until the discovery of a new process for preparing and administering impacted nebula by forced dilatation, and the invention of an instrument for accomplishing the same With the exception of this discovery and invention, the means and measures employed at the present time in the local treatment of the air passages are identical with those of the past

In a former paper entitled, "A New Apparatus," contributed to and published in the Journal of the American Medical Association May 12, 1894, page 702, the construction and operation of the Standard Dilator, the process of forced dilatation and the methods of using the same in the treatment of the ears, nose, throat and chest was illustrated and fully described Judging from the number of physicians who have asked for additional information, both in person and by letter, also from the fact that some have, on the advice of manufacturers or dealers, attempted to carry out this process by the use of nebulizing inhalers or other similar but improperly constructed apparatus, I conclude that neither the construction of the apparatus nor the principles underlying the process of forced dilatation with impacted nebula, nor the motive that prompted the writing of the paper is generally understood Actuated solely by a desire to benefit the profession, and to add my mite to the sum total of medical science, I accepted the opportunity of being the first to call the attention of physicians to this discovery and invention through the medical press, an opportunity which I am persuaded but few of my medical brothers would have declined under similar circumstances I was not then, am not now, and never was financially interested or benefited by the manufacturing or sale of any instrument or apparatus for physicians' use

Manufacturers and dealers have at their own suggestion conferred upon me the empty honor of naming after me, instruments and apparatuses similar in construction to those used in my practice That, and the gratification of having aided in pioneering their use, is all the remuneration that I ever received or would have accepted

The purpose of this paper is to call attention to the Hand Dilator and a recently perfected portable apparatus which constitutes a complete outfit to be used in the process of preparing and administering impacted nebula by forced dilatation In addition to being well adapted to the scientific and expeditious treatment of the ears, nose, throat and upper air passages, it brings the lungs and deeper air passages completely under the control of the physician.

The apparatus herewith illustrated consists of a receiver of eight gallons capacity, with pump, regulating meter valve, conducting hose, and cut-off, all combined As the complete outfit weighs less than eighteen pounds, its portability adapts it to use at the bedside of the patient in home, sanitarium or hospital It is equally well adapted to the use of the general practitioner in the treatment of office patients



The Hand Dilator is attached to the cut-off and held in the hand in the same manner that sprays are attached and held It consists of a strong 2 ounce glass jar surmounted by a dome to which the nasal, the laryngeal, or pharyngeal tubes or nozzles can be adjusted or changed from one to another instantly

The percentage of the medicament in the impacted nebula can be regulated from the minimum to the maximum strength instantly or gradually by turning a thumb-screw This obviates the preparing or keeping solutions of different percentages of strength

The Hand Dilator is as efficient as the Standard Dilator in the preparation and administration of any selected medicament into any air passage or cavity without liability of lacerating tissue, or causing hemorrhage

As impacted nebula is practically dry, it can be administered into the lungs without injury or undue irritation Into the Eustachian canals and tympanic cavities through the nares, with or without the use of a catheter, into the nose or throat without flooding the cavities with a disagreeable and disgusting excess of aqueous or oily solution, which the patient finds it necessary to immediately eject by hawking, spitting, and blowing the nose.

Although impacted nebula is practically dry, its administration by forced dilatation will remove deposits of tenacious mucus or incrustation from the nose or throat quicker and easier than the same can be removed by liquid sprays.

For fully illustrated instruction in the methods of administering, and the physiologic and therapeutic difference between forced dilatation, inhalation, Politzerization and catheterization, see my paper published May 12, 1894. The method of using the Standard Dilator or the Hand Dilators is essentially the same.

Notwithstanding exact nicety is required in all the details of preparing and administering any selected medicament by this process and apparatus, it is nevertheless confidently expected that its adoption and use will inaugurate an era of improvement in this particular branch of practice, and lead to the discovery of other means and measures whereby cures may be effected in the upper air passages without a resort to the supplementary surgical interference so frequently found to be required during the past, while by its judicious use those afflicted with pulmonary diseases may be saved the expense and fatigue of long journeys in wandering over the earth in an effort to prolong life through climatic influence.

While the propriety of a change of climate as an expedient may for obvious reasons be questioned, the free, full and unobstructed breathing of air is acknowledged to be an absolute necessity for the preservation of health and life, for the well-known reason that it is through the respiratory function only that oxygen can enter the blood and carbon dioxid can be eliminated. The importance of oxidation in the chemic and physiologic processes by which the food stuffs are changed into molecules of bioplasm for the formation of the white blood corpuscles is well known. It is also well known that it is through the aid of the oxygen carrying hemoglobin of the blood that the molecules of bioplasm constituting the white blood corpuscles are elaborated in the processes of assimilation, through which tissue metamorphosis is brought about. Thus a partial equilibrium in supply and waste is maintained.

The heat resulting from respiratory combustion is dissipated in part through physiologic evaporation. The remainder being stored as force, in ganglionic nerve centers, to be expended as required.

Although respiration is such an important function there are but few persons who breathe enough air, none too much and many not enough.

There are persons who have no control over their respiratory apparatus. They can not expand or contract their chest or take a long, full, deep breath. They breathe but little air and as a matter of course the purer it is the better for them. Such persons can not practice lung gymnastics, they do not know how, and many of them can not be taught. Forced dilatation is their only help, for by it they can be made to breathe full and free. To the very feeble, forced dilatation affords all the benefits of lung gymnastics and outdoor exercise without fatiguing exertion. It is efficient in developing the chest of the young or middle-aged and for maintaining the lung capacity of those who are old or exhausted by mental or physical work. It affords relief to those whose respirations are impeded by atmospheric or other influences, influenza, hay fever and asthma being extreme examples.

The prevalence of milder and more obscure forms of impeded or slightly obstructed respiration leads to the conclusion that there is some peculiar property in the air of every locality which, during certain seasons of the year, affects the air passages of many, while others are exempt. To this, or to some other equally obscure and unpreventable cause, may be traced many maladies which are primarily initiated in the air passages, and which on account of obscure and misleading indications are neglected during the early stages. The affection results in varying degrees of stenosis or occlusion of the upper or deeper air passages, or some of them. The objective and subjective symptoms being entirely different from those attending recognized and well-defined cases of coryza, influenza, hay fever or spasmodic asthma, not only in the absence of cough, excessive secretion, congestion or inflammation, but in the fact that such patients rarely complain of difficult breathing. The subjective indications being few and the objective obscure, the physician is often misled through the patients declaring that their lungs are good and that "there never was a case of consumption in their family." They simply complain of "that tired feeling" and from that alone many of them seek relief. Some of them before, others after, and not until after, swallowing the contents of several bottles of a widely advertised nostrum find their way to the family physician or general practitioner, who after a casual examination generally prescribes tonics and rest. But "that tired feeling," complicated by other evidences of decline, often continues until the patient is pronounced incurable and advised to seek relief in a change of climate. But as there is no climate or locality where all are absolutely free from obstructed or restricted respiration, there is none where mankind can be free from the resulting sub-oxidation, mal nutrition, and all the evils which that condition implies.

The fact that there are many persons who do not breathe through both nostrils, and some who can not nor have not breathed well through either for years, may be mentioned as an example of obstructed respiration, and of which many are unconscious until their attention is called to it. This fact leads us to conclude that if the lungs of such patients were as completely under their observation as is the nose, they could be made to realize a similar condition of stenosis or occlusion in the deeper air passages.

General practitioners will, I trust, pardon me for suggesting the necessity for a thorough examination of the chest in all cases of illness. For the reason that the important part which the lung plays in the elimination of the waste products, water and carbonic oxid, can not be over-estimated. A quantitative and qualitative analysis of the respiratory exhalations from any one suffering with any form or degree of illness will disclose the fact that the equilibrium of supply and waste through respiration is not maintained, due to obstructed functional activity on the part of the lungs. It therefore follows that a restoration to the normal capacity, and to functional activity, and the consequent restoration of an equilibrium in supply and waste, through respiration, is an important factor in the restoration and preservation of the health.

While the pharmacist and instrument-makers have placed agents in the hands of physicians to control most maladies, either by therapeutic measures or surgical procedures, no agent was at hand by which diseases of the deeper air passages or those resulting from and continuing on account of obstructed respiration could be controlled, until the discovery of the process of forced dilatation with impacted nebula and the invention of the dilator

After nearly two years' experience with a four-bottle set of the Standard Dilators, and a set of Hand Dilators, I now feel justified in attributing to their use as auxiliary to other medical and surgical means and measures, a more rapid and constant improvement in all cases treated, and the recovery of several persons in the first and second stages of pulmonary tuberculosis, others of long-standing asthma, others of impaired hearing from ankylosed ossicles, hypertrophied membranes and thickened and retracted drum-heads—recoveries that would not in all probability have occurred under the usual methods of treatment

While it is well known that apparently miraculous recoveries do sometimes occur under all systems of treatment, and occasionally without treatment, yet where there is an almost unbroken uniformity in the improvement of a large number of persons of all ages, sexes and occupations, afflicted with almost every form of diseases of the air passages, where recoveries are frequent and failures are rare (as has been the case in my practice during the past year) am I not justified in concluding that such results are something more than a mere coincidence?

It is not the purpose of this paper to announce a cure for consumption or any other disease, but to call the attention of conservative physicians to an apparatus and process that is indispensable in the rational treatment of the upper air passages, and the only means by which pathologic conditions of the deeper air passages can be reached or controlled

Notwithstanding the prevalence of pulmonary diseases, there are comparatively few physicians who include the chest in the limit of their specialties This neglect of the lungs is due no doubt to the fact that inhalations have been found inefficient, while clinical experience has proved the impracticability of administering an efficient sterilizing agent or germicide, either internally or indermically

The use of the inhalers has been abandoned by many leading special and general practitioners, for the reason that it has been found to be impossible to introduce into the deeper passages the smaller bronchia or air cells of the lungs, either a healing or a sterilizing agent by inhalation This fact has recently been emphasized in a series of experiments on the lower animals by Dr H Thomas and his assistants These experiments prove it to be impossible to introduce by inspiration the atomized medicament contained in nebulous vapor, into the unobstructed smaller passages and healthy air cells of the animals experimented upon The Doctor (in his paper published in this Journal) states that in his clinical experience with inhalations, the most rapid improvement occurs during the first ten days treatment This coincides with the observations of others, who have also observed that if the lungs be invaded by bacilli or are involved in degenerative or destructive processes, that the improvement is frequently followed by a more rapid decline Hence many observers have come to the conclusion that, no matter how the inhaler may be constructed, or how perfectly the inhalant may be prepared by its use, whether hot or cold, moist or dry, or whether a volatile or a nebulous vapor, inhalation tends to promote and hasten instead of modifying and arresting degenerative or destructive processes in lung tissue

In my opinion there no longer exists any excuse for neglecting the treatment of those afflicted with pulmonary diseases, or for continuing disappointing and discouraging experiments with inhalers or inhalations A physician can now procure an outfit by the use of which, in the administration of properly selected medicaments by the process of forced dilatation, he will be enabled to treat diseases of the chest with a uniformity of success equal in degree or ratio of recoveries to that following operative surgery in the treatment of other desperate maladies

To obtain satisfactory results, the technique of forced dilatation must be carried out in detail Physicians are not apt to do this, unless they understand and appreciate the distinctive difference between inhalation, inflation and forced dilatation, and also the difference between an impacted nebula and the smoky nebulous vapor evolved from the various nebulizing inhalers

I am not urging a distinction where there is no difference I am trying to make you realize the distinctive difference as I do, and as do most physicians who use the dilator for administering impacted nebula by the process of forced dilatation

Although the efficiency of this apparatus and process can not be fully demonstrated upon dogs, cats or other dumb animals, for the reason that impacted nebula can not be forced into the deeper air passages without the intelligent cooperation of the subject operated upon, nevertheless when administered to persons who passively coöperate, its physiologic action on organs and functions and its therapeutic effect on pathologic conditions may be determined by an improvement in organic action, as manifested in the rate and character of the pulse and respirations, in an equalization of circulation and temperature, in an improvement in the processes of digestion, nutrition, assimilation, secretion, excretion and elimination, all resulting from increased aeration, through which the equilibrium in supply and waste is maintained

Armed with the dilating apparatus, the physician is enabled to expand the collapsed smaller bronchia and air cells, and to detach, dislodge and remove by explosive expulsion such deposits as have accumulated from excessive secretion or other morbid processes It should be borne in mind that it is behind these obstructions that the bacilli find a domicile conditioned by excessive moisture and high temperature for their vigorous activity In the earlier stages of pulmonary tuberculosis the obstructed areas are circumscribed In these circumscribed localities the moisture is excessive and the temperature high, as moisture can not evaporate in tubes, cells or cavities in which air through respiration does not circulate. The excessive heat and moisture in these circumscribed localities can only be absorbed or dissipated through the physiologic process of respiration and evaporation

Let all controversy be avoided as to whether the bacilli initiate the pathologic condition by an infectious invasion of previously healthy tissue, or whether the arrest of the physiologic function of respiration and evaporation in circumscribed localities result in a condition of high temperature and excessive moisture sufficient to develop the active and destructive bacilli from germs that previously were and otherwise would have remained inert and harmless

Every physician has either formed his own, or else he has adopted the opinions of others on this subject Beside investigation as to the initiative cause belongs of right to the domain of hygiene and preventative medicine

Active and energetic remedial measures should be directed against conditions as we find them Temporizing expedients should be discarded and especially so when an agent is at hand by the use of which the physician can remove the immediate cause and otherwise control present conditions, regardless of the remote or initiative cause When a farmer discovers that the bugs are devouring his potato vines he does not stop to inquire which or what was the primary cause It is sufficient for him to know that if he does not kill the bugs that the bugs will kill the vines When on examination the physician finds the lungs of his patient infested by tubercular bacilli he knows that if does not kill them they will kill the patient He knows that the area of lung capacity as evidenced by chest expansion is reduced, that the air passages and cells are collapsed or are obstructed in circumscribed localities He also knows, or should know, that it is behind these obstructions and beyond the reach of inhalations that the bacilli find their favorite pabulum That it is there they feed, fatten and propagate, that it is there the excreta and ptomaine is ejected and emitted which poisons the fountains of health, prostrates and makes sickly all the central forces of life

Owing to obstructed blood circulation in the circumscribed localities, on account of solidification, through congestion, fibroid or tubercular degeneration, it has been found to be impossible to even attenuate the bacilli, or to arrest the degenerative or destructive processes by any agent administered either internally or indermically

The process of preparing and administering agents in the form of an impacted nebula by the dilator offers the sole means by which recovery is possible The collapsed, stenosized or occluded bronchia and air cells being expanded, and the obstruction removed, the air through respiration comes in contact with all surfaces The excessive heat and moisture are absorbed by physiologic evaporation The bacilli being first sterilized through attenuation, are finally exterminated by the germicide which is conveyed and deposited by the impacted nebula

The benefit of forced dilatation in the improvement of the general health, is as evident and satisfactory as its mechanical and therapeutic effects are locally More air being breathed after forced dilatation, it is thus through increased oxidation that the processes of nutrition and assimilation are improved and degenerative and destructive processes arrested Through increased oxygenation (aeration) of the blood, constructive molecules are organized and energy is stowed, to be expended in maintaining organic and functional activity Notwithstanding the apparent simplicity of the apparatus and process, there is sufficient scope for the employment of the most profound medical knowledge and dextrous skill in the selection, preparation and administration of the medicaments to be employed in the treatment of the various forms and stages of diseases of the air passages

In the selection of an antiseptic germicide to be *administered in the forms of an impacted* nebula, preference should be given to the following First, to the chlorides of gold, of mercury, of iron (especially in hematorrhea), of ammonium Second, to iodin and the iodids bin-iodid of mercury being especially valuable, and to the sulphides or sulphates No unfavorable physiologic effects follow their use The menstrum for each should be alcohol and glycerin equal parts, using as little water as possible to dissolve the salts

The volatile aromatics, in gums, crystals or essential or ethereal oils as thymol, eucalyptol, pine needles, cubebs, tar, creosote, carbolic acid, camphor, menthol, etc , are of known value, when selected and used singly or in combination in the treatment of the air passages generally In my practice I prefer and use those prepared by the Ozone Company of New York and Chicago, as their oils contain a large per cent of ozone If the secretion be excessive, alcohol and glycerin should be used as a menstrum If the membranes are dry from scanty secretion, a neutral vegetable oil is preferable, as therapol which contains 10 volumes per cent of ozone as prepared by the same company All menstrums used in preparing solutions to be administered into the lungs and tympanic cavities especially, should be an ingredient that will speedily evaporate or else be readily absorbed by the tissue That elegant, *odorless, tasteless* and neutral carbon oil known as abolin, glymole and a score of other names, should never be used as a solvent menstrum for medicaments to be administered into any of the air passages, especially not into the tympanic cavities or the lungs The tissue will not absorb the oil and on account of greater affinity the oil retards the absorption of the medicament by the tissue

The most serious objection to the use of the oil is the fact that the entire surfaces *throughout* the air passages become coated over with it The oil will not evaporate and the tissue will not absorb it, while at the same time it prevents physiologic evaporation by excluding the air from the mucous surfaces Thus by its peculiar behavior, it tends to arrest the processes of osmose to a greater or less degree, which results in sub oxidation

Its only legitimate place in medicine is as an application to denuded, cauterized, lacerated or acutely inflamed surfaces For the reason that its peculiar properties, as above described, makes it an agent well adapted to protect such surfaces from the air, thus preventing evaporation, oxidation and incrustation These same properties will gradually exclude it from the prescriptions of physicians, just as the use of cosmolin or vaselin has been discontinued except in those cases to which it is adapted

While I shall take pleasure in answering questions and giving any additional information or instruction that I can to physicians who choose to inquire, either in person or by letter, regarding the professional use of the process and apparatus, I wish it understood that I can not give any further information relating to the manufacture or sale of the same, other than to say that both my standard and hand dilators were made by the Owens Brass and Copper Works, of Chicago

Columbus Memorial Building

ORIGINAL INVESTIGATIONS ON THE NATURAL HISTORY, (SYMPTOMS AND PATHOLOGY) OF YELLOW FEVER 1854–1894

BY JOSEPH JONES, M D, LL D
NEW ORLEANS LA

(*Concluded from page 721*)

CHAPTER XI

EFFECTS OF PUTRID MATTERS ON THE BLOOD

M Gaspard appears to have been one of the first experimenters with putrid matters On June 19, 1809, he injected into the jugular vein of a small bitch, half an ounce of fetid liquid, arising from the simultaneous putrefaction of beef meat and dog's blood On the instant the animal made many movements of deglutition, and very soon afterward experienced dyspnea, *malaise* and depression She lay on her side refusing all food, and soon voided first her excrements, then her urine In an hour's time, prostration of strength, gelatinous and bloody alvine discharges often repeated, dysentery, redness of conjunctiva, afterward, chest painful, belly hard and painful when touched, gradual extinction of strength, bilious, gelatinous and bloody vomitings Death three hours after injection On opening the body, yet warm, the lungs were engorged with blood and of a violet or blackish hue, with many ecchymosed or petechial spots, which likewise existed in the left ventricle of the heart, in the spleen, mesenteric glands, gall bladder, and even in the subcutaneous cellular tissue The peritoneum contained some spoonfuls of a reddish serosity, but the mucous membrane of the alimentary canal was most affected That of the stomach was slightly inflamed, that of the intestines, above all—the color livid, with black points, and covered with a gelatinous and bloody substance, resembling the lees of wine or the washings of flesh In addition, this inflammation was accompanied with a slight thickening of the tissues, and possessed a hemorrhagic or scorbutic appearance

On July 14, 1821, Gaspard injected into the right jugular of a large dog, two ounces and a half of a fetid liquid that had arisen from the fermentation for two days of cabbage leaves, at a temperature of 20 degrees R It was thick, not at all acid and was mixed with an equal quantity of water While injecting the animal often swallowed, and before long began vomiting, which was frequently repeated, and soon fell into a state of depression Some hours afterward, great general uneasiness, pain in chest on pressure, respiration embarrassed, difficult and plaintive, appearance of peripneumonia, then vomiting anew and great depression all day At the expiration of nine hours he had in the night a very fetid liquid stool, black as soot, analogous to the evacuations in melæna, and formed of a little excrement and mucus, with a great deal of apparently putrid blood Some time afterward the dog had another stool, but it was merely muco-sanguineous On July 15 (second day) depression more considerable, adynamia, recumbent on the side, vascillating walk, pulse small and febrile, ardent and seeming inextinguishable thirst, urine natural and abundant, respirations few and weak During the day the pulsations of the heart would return at intervals with an extraordinary strength and noise, resembling what occurs in the highest degree of aneurysm, combined with hypertrophy of the organ July 16, less depression, cessation of the disordered action of the heart, but still ardent thirst, refusal of food, fever and sometimes vomiting of drink July 17, same condition July 18, symptoms aggravated, extreme debility, walk tottering, excessive thirst, eyes red, inflamed and blear, nostrils swollen and filled with mucus obstructing the passage of air, mucous membrane of the mouth violet red and phlogosed At mid-day, liquid stool of a whitish-gray color, mixed with grumous blood, of a purulent character and odor Death during the night at the termination of the fifth day of the experiment

Before opening the body, the skin, subcutaneous cellular tissue and muscles presented the same appearance as after death from asphyxia from want of air, and did not appear exempt from inflammation Conjunctiva, pituitary and buccal membranes red or violet, and covered with a thick abundant mucus lungs of a gluey feel, slightly phlogosed in some spots, but crepitant enough The left ventricle of the heart presented many brown spots or sort of ecchymoses, penetrating even into the tissues, it was, besides, of the color of the lees of wine which contrasted singularly with the natural color which the right ventricle preserved

The right ventricle was in part filled up with a hard albumino-fibrous concretion, with a yellowish-white hue like fat, very homogeneous, undistinguishable from the molecules of the injected liquid, weighing two and one-half grams, almost entirely free and only adhering to the ventricle by a small attachment This concretion with ramifications of the same color and consistency, extended into the pulmonary artery, and into the superior vena cava, and also into the azygos, axillary, and even to the right jugular Probably it had been the cause of the violent pulsation of the heart The esophagus and stomach were apparently healthy, but the mucous membrane of the intestines, and particularly of the duodenum, rectum, and a small portion of the small intestines was of a violet-red, colored chiefly in longitudinal wrinkles and irregular patches, which gave a parti-color to the outside of the intestines before they were cut open Otherwise this inflammation was without thickening of the tissues, without ulcerations and much resembled ecchymoses or hemorrhage In the duodenum were observed many kinds of open blisters, whence a large quantity of sanious blood was made to flow by pressure on the neighboring mesenteric vein The internal membrane of the rectum was still more affected, and its mucous glands were very swollen and distinct The intestine contained puriform matters, resembling those of the last evacuation The other intestines contained mucus matter of a whitish-gray color, and very thick The mesenteric glands appeared as if penetrated by blood and altogether inflamed The gall-bladder, stained exteriorly by brown and violet spots, was filled with a black thick bile, as ropy as melted glue

Gaspard also performed other experiments with putrid liquids, with similar results, and he demonstrated for the first time, that putrid liquids injected into the cavity of the pleura, etc , produced the same effect as injections into the veins (*Journal de Physiologie*, tome 2)

M Magendie, fully appreciating the important facts that since medicine has existed, the pernicious influences of ponds, marshes, neglected harbors, and in general, all places, in which animal or vegetable matters were undergoing putrefaction, are recognized, and that men and frequently animals, inhabiting the neighborhood of these infected foci, were subject to serious maladies, *which authors have designated under* different names, such as the plague, intermittent *fever, malignant fever, dysentery, cholera morbus,* typhus, yellow fever, etc , repeated with the greatest care the experiments of M Gaspard, *with an eye to* their application to medicine, and the elucidation by *the experimental method of the manner in which* putrid animal or vegetable matters act upon the healthy individual Magendie affirmed that the results of M Gaspard were perfectly exact, and in addition he observed that different kinds of flesh have not the same activity in their putrefaction The muscles of herbivorous mammalia appear less active than those of the carnivora Putrefied oyster water did not cause very violent effects, but the deleterious matter *par excellence*, is putrid fish water, some drops of this water injected into the veins producing in less than an hour, symptoms which have the greatest analogy with those of typhus and yellow fever Death usually ensued in twenty-four hours, and upon opening the body all the traces of a chemic alteration of the blood were discovered The blood remained *for the most part fluid*, it had transuded through the walls of the vessels into the different tissues—particularly was it found to have traversed the intestinal mucous membrane Blood as well as mucus accumulated in the stomach and intestines, where it presented all the intermediate hues between bright red and deep black

Such *experiments seemed to sustain the view that* the healthy state of the blood in which its tendency to coagulation is very strong, prevents the transudation of the liquid through the walls of the smaller vessels Magendie established that the same putrid matter, so deleterious when injected into the veins, has no bad effect when introduced, *even in a strong* dose, into the stomach or large intestines of animals, and that when putrid liquids were filtered, the animal which received the filtered liquid into its veins, experienced much less intense and much more prolonged pain than that which received the unfiltered liquid An equal quantity of the same putrid water injected into the veins, or introduced with suitable precautions, into the divisions of the bronchia, do not produce the same effects Injections into the lungs produce less serious consequences than injections into the veins Magendie also subjected animals to the effluvia of putrefying vegetable and animal substances, and he thus sums up the results of these and the preceding experiments

"From the preceding facts, it is seen that putrefied liquids when they are injected into the veins cause death, or effects which have the greatest analogy with those of *yellow fever and typhus*, that the prolonged respiration of putrid miasms produces death also, but in a period much longer *and with symptoms which* differ from the diseases I have just named What can be the cause of such difference of the mode of action in the same substances? Why this diversity in their deleterious properties? It would be so much the more important to be able to answer these questions, as therein lies the whole difficulty, relative to the epidemic diseases *which have recently* occupied the public mind "

Among the conjectures which *may be offered, there* is one which merits particular attention We may presume that different atmospheric conditions, and particularly temperature and moisture, ought to have a great influence upon the mode of action of putrid miasms (*Journal de Physiologie*, tome 3, "Speculations on the Cause of Yellow Fever," by John Harrison, M D , *Professor of Physiology and Pathology* in the Medical College of Louisiana, New Orleans, *Medical and Surgical Journal*, March, 1817, vol iii, No v, pp 568–573) The results obtained by MM Leuret *and Hament* (*Journal des Progrès des Sciences Médicales*, 1827, vol v, pp 1, 181), were similar to those of Gaspard and Magendie

The more recent experiments of Dr Andreas Hogzes, of the University of Pesth, performed during the epidemic of cholera in that city in 1873, are of interest in connection with the present discussion of *the effects of putrid and morbid matters on the* blood

Dr Hogzes endeavored to solve the following questions

1 Are fresh choleraic discharges capable of exerting a deleterious influence on the organism, and in what form?

2 Does gastric and intestinal catarrh, artificially produced, increase the liability to be affected by choleraic discharges?

3 Is the air capable of carrying with it particles or choleraic evacuations, which act injuriously on the organism, and if this be the case, is there a difference between non disinfected and disinfected discharges, simple diarrheal dejections and putrid fluids?

4' Are choleraic evacuations, when freed from elementary *organisms, capable of affecting animals?*

5 What parts of disinfected and of non disinfected choleraic discharges, does a current of air carry with it? What is the further fate of these elementary forms, if they fall on a soil favorable to their development, or on one that is neutral? In what way do *they modify the action of the medium?*

In his experiments, Dr Hogzes used choleraic evacuations that had been discharged an hour, or an hour and a half The animals operated on were dogs and rabbits

Six dogs of middle size were the subjects of experiments bearing on the first and second questions In three, catarrh of the stomach and intestines was induced by the administration of the sulphate of copper and the subcutaneous injection of a few doses of croton oil, the other three were allowed to remain healthy *As soon as the vomiting and diarrhea had* ceased in the first three dogs, Dr Hogzes administered to each of two dogs (one healthy and one diseased), fresh *urine, intestinal evacuations*, and vomited matters, from choleraic patients Both dogs had intestinal catarrh (frequent vomiting and diarrhea) The dog with the sound intestinal canal was well on the third or fourth day, while one of those in which gastro intestinal catarrh had been induced, died on *the second day, having* had constant vomiting and fluid evacuations, and the other two were not convalescent until the fifth or sixth day, and remained weak some time afterward

To obtain an answer to the third question, Dr Hogzes kept rabbits exposed for some time to currents of air charged, 1, with non-disinfected, 2, with disinfected choleraic evacuations, 3, with ordinary diarrheal stools, 4, with the fluid of putrid meat The oxygen necessary for respiration was supplied in abundance The rabbit in each case was confined in a glass bell jar, placed in a well ventilated apartment, the bottom of this jar was airtight, and the air, charged with the evacuations or with the putrid fluid, passed in by one aperture at the top, and escaped by another The air having been first made to pass through the fluid of which the effect was to be tested, was forced into the jar by a Bunsen's water apparatus, at the rate of 15 liters per minute To prevent the air from escaping in its foul state through the ventilating tube, it was made to pass through cotton wool and sulphuric acid, and in this way it was possible, without danger of injuring the health of the operator to continue the experiment for any time

Two rabbits in one of which bronchial catarrh had been induced by the inhalation of ammonia, were subjected for twenty-four hours to a stream of air charged with non-disinfected choleraic evacuation While under the bell the animals had slight catarrh, did not eat and were depressed In the third twenty-four hours, violent diarrhea set in, and both animals soon became cold and collapsed, the one in which bronchial catarrh had been induced, died first, and the other five hours afterward—both presenting the same symptoms A small rabbit exposed for twenty-four hours in the same apparatus to air charged with choleraic discharges disinfected by carbolic acid, remained healthy Another animal of similar size was kept without injury for twenty-four hours in a current of air saturated with ordinary diarrheal evacuations A large rabbit, exposed for twenty-four hours to a stream of air, saturated with the fluid of meat that had been decomposing during five weeks, at first lay stupefied at the bottom of the apparatus, but immediately afterward rose up, and escaped without injury

The experiments bearing on the fourth question consisted in the injection into the jugular veins of dogs and guinea pigs, in one case of choleraic discharges containing microscopic organisms, and in the other cases of the same discharges after filtration With regard to the last question, Dr Hogzes conducted through fresh non-disinfected choleraic discharges a slow stream of previously purified air The elementary forms brought over with the air current were received into two media—one neutral, distilled water, and one suitable for their development, Cohn's fluid The fluids were drawn off by drops from the vessels, and examined with the microscope Both distilled water and Cohn's fluid have no action when injected into the vessels, and the question was, whether their action would be changed by a certain amount of saturation In a short time, a large number of elementary forms (chiefly bacteria), with which the cholera excreta were saturated, were carried over into the fluid, and in twelve hours produced a milky cloudiness in Cohn's solution At the end of the second twenty-four hours the surface of Cohn's fluid was covered with a bluish-green shiny layer of cryptogamic matter, 2 centimeters thick, and the fluid itself assumed a peculiar smell, reminding one of decomposing fruit The distilled water which remained quite clear, although charged with organisms, and the Cohn's fluid were injected into the veins of dogs and rabbits The result was, that both the distilled water and Cohn's fluid produced the same symptoms as the choleraic discharges when injected into the venous system—acute gastro-intestinal catarrh, and in some of the rabbits death

Similar researches with discharges disinfected by carbolic acid showed that the power of development in the elementary organisms was destroyed, the Cohn's fluid still remained clear at the end of twenty-four hours On injecting the fluids into which the air had been conveyed through the disinfected excreta, the symptoms of poisoning with carbolic acid were produced, this is readily explained, when it is remembered that the current of air in the course of twenty-four hours must have carried with it a large amount of carbolic acid

While these experiments were being carried on, the attendant, who had been exposed for some time to the emanations from the vessels containing the choleraic excreta, had a severe attack of gastro-intestinal catarrh, which recurred twice within a short period His little daughter, who slept with him, had vomiting and diarrhea the day after he became ill Five days after his illness, two cases of cholera (one of which ended in death) occurred in the house in which he resided, which had hitherto been free from the disease During the microscopic examination of the choleraic discharges, Dr Hogzes had loss of appetite, a coated tongue, and a constant sensation of oppression in the epigastrium, after the researches were completed, these uncomfortable feelings disappeared

The following are the conclusions at which Dr Hogzes has arrived

1 Fresh choleraic discharges exert an injurious influence on animal organisms, as it seems in different degrees in different animals

2 The principal or infallible evidence of injury after the introduction of choleraic discharges in any way, is more or less inflammation of the stomach and intestines

3 An artificially induced gastro-intestinal catarrh renders animals more or less liable to be thus affected

4 The same symptoms may be produced by the inspiration of a stream of air charged with particles from non disinfected choleraic discharges, as well as by immediate action on the stomach, intestines, or venous system, while the particles in choleraic discharges disinfected by carbolic acid, appear to be quite harmless

5 A current of air, passing through non-disinfected choleraic excretions, carries with it cryptogamic elements, which vegetate abundantly in a favorable soil, while the same growths from discharges that have been disinfected by carbolic acid are incapable of multiplication

6 Choleraic discharges freed from organized elements are capable, by reason of their chemic composition, of producing the same pathologic changes as they do when they contain the organized forms[51]

The last conclusion established by the experiments of Dr Andreas Hogzes, is of importance in establishing the fact that the propagation of cholera does not depend on the organized elements It may, however, at the same time be true that the fungi developed and propagated in the choleraic discharges, may become the vehicles or carriers of the poison of cholera We have regarded the fungi found in the black vomit and other fluids of yellow fever, as in no respect the cause of the disease, but at the same time it may be regarded as probable that when developed in the poisonous matter of yellow fever they may become agents for its dissemination

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[51] Centralblatt für die Malarinischen Wissinschaften, Nov 1 and 8 1873

I have shown by a series of experiments[52] on the action of the poison of the American copperhead and of the American rattlesnake on living animals

1 The primary and chief action of the poison of the American copperhead (*Trigonocephalus contortrix*) is upon the blood

2 The poison of the copperhead is directly destructive to the colored corpuscles of the blood, altering their physical and chemical properties and relations, and rendering them unfit for the performance of their important offices in circulation, respiration and nutrition

3 The poison of the copperhead appears to have an affinity more especially for the coloring matter of the colored blood corpuscles

4 Under the action of the poison of the copperhead, the animal temperature is but slightly increased notwithstanding the profound changes inaugurated in the blood, and after the establishment and propagation of the pathologic changes the temperature descends

5 The action of the heart is increased in frequency and diminished in force under the influence of the poison of the *Trigonocephalus contortrix*

6 The profound alterations induced in the constitution of the blood by the poison of the American copperhead, give rise to passive hemorrhages into the cellular structures, and from the intestinal mucous membrane This phenomenon recalls strongly the passive hemorrhages in certain febrile diseases, and especially yellow fever Such experiments indicate that the black vomit of yellow fever is the result of the action of an irritant poison upon the blood, and gastric mucous membrane We have also in these experiments an explanation of the mode in which dysentery might be induced by a poison introduced into the blood

7 The poison of the rattlesnake (*Crotalus durissus*) acts as a local irritant upon the capillaries, and as a destructive agent in the blood and muscular structures, causing congestions and bloody effusions, and softening and disorganizing action of the muscular fibers

8 The poison of the rattlesnake destroys by its direct effects upon the cerebro-spinal centers, and by its depressing effects upon the sympathetic ganglia, and muscular structures of the heart, and also by the changes which it induces in the composition of the blood

If therefore a few drops of a secretion elaborated by special organs in living animals in a normal state be capable of producing profound disturbances in the blood and nerves and muscular systems, it cannot be unphilosophical to refer the origin of certain diseases, as typhus fever and yellow fever, to the action of special poisons arising in the human body when subjected to certain conditions of food, climate, moisture and the foul air arising from overcrowding

Another striking fact is that a deadly volatile poison may be generated during the fermentation or chemical and physical changes of certain vegetable constituents Thus by a series of experiments[53] we have shown that the volatile poison hydrocyanic acid (prussic acid) induces profound alterations in the blood, and through this medium affects all the organs and tissues We have endeavored to open the vast field of the action of well-known poisons, in order to elucidate the nature of the unknown febrile poisons [54]

It is surely worthy of note that the most destructive vegetable product is the direct result of fermentation and is volatile

Such facts may be plausibly adduced to show that a deleterious agent capable of producing yellow fever might be the product of animal and vegetable matters under different ranges of temperature The conjecture has been hazarded that the poison of this disease resembles a volatile essential oil and which in conjunction with the albumin and ammonia of the atmosphere induces the phenomenon of yellow fever They may also be adduced to sustain the hypothesis that the poison may be engendered in the human system under certain circumstances, and may be propagated through the medium of the atmosphere and by the agency of fungi and animalculæ

THE END

PRE-COLUMBIAN LEPROSY

BY ALBERT S ASHMEAD, M D

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NEW YORK

(*Continued from page 728*)

Mr Saville tells me that in the pottery of ancient Mexico there are symbolic pictures of death, human faces with blinded eyes It is at least his opinion that this extinction of the eyes means death, for the god of death of these peoples is always represented with a stick puncturing the eyes But nothing that can be considered as disease representations has ever been found there

In Chiapas, Mexico, he says images have been recently found showing clubbed feet, arms in cramped positions, etc This find is believed by archæologists to be exceedingly valuable, but it has not been, as yet, much reported upon

If leprosy existed in America in pre-Columbian times, and if these deformations on *huacos* pottery are intended to represent lepers, the same idea must have been conceived previously in Japan, or Eastern Asia in general, from whence the disease itself would be likely to have come But Prof Edward S Morse writes me "The pre-historic pottery of Japan has no trace of lepers either incised, in relief, or painted Nor do the forms ever represent a natural object In early historic times, say from 1200 to 1500 years ago, a soft reddish pottery hand-made, and a hard gray pottery, turned but not glazed, in very rare cases, showed the form of natural objects "

Mr Tanaka, a Japanese importer, who is probably as conversant with modern Japanese pottery and art as any man living, affirms that he never saw the representation of a leper, either in pottery or in the drawings of Japan * The blind man is represented, he is, in fact, considered as possessed of virtues and powers refused to the crowd of men with regular eyes, he is the massager and acupuncturer

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[52] British Medical Journal Dec 18, 1878, p 697-698 Medical and Surgical Memoirs Vol I, pp 519-529

[53] Medical and Surgical Memoirs vol I, pp 279-330

[54] Et seq Medical and Surgical Memoirs vol I pp 272-582

*NOTE —In the 'Japanese Manual for Ladies,' a book on etiquette published in the eighteenth century, there is a drawing of the Empress Gemmyo (A D 708-721) who washed a thousand lepers with her own hands and took general care of them (She built the first leper hospital in Japan) In this picture a tuberculated leper is represented He has the leonine face without, however, loss of nose In a Japanese book called 'Hakkenden " which means "Story of Eight Warriors,' written early in this century, there is a representation of a leprous beggar He is without a nose and without hair his red face is hypertrophied and tuberculated His upper lip is represented much swollen and tuberculated His toes are gone the hands show scabs and tubercles These are the only representations of leprosy known in Japan I may say that the loss of nose and upper lip in Japan is frequently observed in the streets This deformation in Japan which is a leprous country (there are 100,000 lepers in Japan) is considered always as syphilitic

Under the reign of the Empress Suinin (A D 29-70) the custom prevailed of burying living retainers around the body of their masters The living beings were replaced by small images of clay, and that new *custom continued until 700 A D* In 700, cremation began, it was first practiced by a Buddhist priest When the custom of cremation extended, the burial of retainers, or of clay images, had no longer any significance in the mind of these primitive peoples These accompaniments were intended for a body, not for a heap of ashes Cremation was, in Japan at least a Buddhistic, a religious institution It was not intended and especially used for the destruction of leprous cadavers Even now lepers are excluded from the burial rites of cremation It is probable that even in our day there is more cremation than interment in Japan, but lepers are severely excluded from the former We might very plausibly conclude, I think, that if leprosy came to this country from East Asia, the absence of skeletons with leprous indications is very significant, for, as I have just said, leprous bodies were not cremated, and therefore ought to be found occasionally Even if these bodies had been as a rule cremated, would not some of them, or parts of them have escaped the incineration? If we can not find any trace of the mutilations peculiar to leprosy, we may safely conclude that leprosy did not exist at all here

Dr Brinton and Professor Powell assert that the civilization of America is autochthonous, that is, it did not come from East Asia, or from any other country Let us now ask ourselves here what autochthony after all means? Can it mean, according to etymology, anything else but the origination out of certain ground, certain environments, and certain circumstances of certain conditions of life? There must be evidently diseases which originate in circumstances which are only found in the place where they originate, and these I should call autochthonous What is, after all, the meaning of autochthony, speaking of diseases? It is natural to suppose that in every human body there are all the possibilities necessary to produce any disease Call them germs, or what you will Suppose that an individual in the city of New York finds himself and his possibilities placed by chance in such a condition that a disease, up to his time unknown, develops in him and that, in some manner, it is transmitted Well, the disease would be autochthonous in New York, as yellow fever probably was in Yucatan Now it is extremely reasonable to believe that at the same time, or at some other time, before or after, the same phenomena had occurred in many other places If we consider this, to what does the autochthony of disease come?

Is leprosy autochthonous wherever we find it, or must we suppose that it comes in every case from inoculation?

If leprosy existed in America before Columbus, if not autochthonous, it must have come from East Asia, or indirectly from its ancient home in Africa, or else these countries were inoculated from America I believe that the lepræ bacillus requires its own soil to thrive upon and that most individuals would resist its development as well as other disease germs are resisted I, for my part, do not believe that the lepræ bacillus is the real factor in the production of leprosy, or that a bacillus is the real cause of disease I believe that there is a cause of the disease of which the bacillus is only a symptom What the nature of that cause is I can not say, and nobody can say, modes of life, kind of food, peculiarities of climate, clothing, morals, etc In all cases, where certain conditions belonging to these factors exist, it may be that the same kind of bacilli find their living, the microbes may have nothing to do with it, except that under these conditions alone they can live Under certain conditions of life, certain bacilli take birth It is not the bacillus that is the cause of the damage that ensues, it is the condition which allows it to prosper

Professor Stillé says "The supreme puzzle is the primary source of each specific germ As yet no Darwin has arisen to show even the possibility of the evolution of such germs To name them bacteria, and assign to each disease a specific bacterium, only removes the difficulty one stage backward "

If the ancient races of America came from East Asia it is reasonable to suppose that they came through Japan, Yesso, the Kurile Islands and Aleutian Islands There are stone age, arrow head connections between Japan, Yesso, the Kurile and Aleutian Islands, there are syphilitic connections between Japan, Vancouver, Mississippi mound-builders and Mexico There is no connection in pottery, or in modes of burial between these two civilizations There is, however, a skull connection between the Indians of Mexico (Tarahumares), ancient Arizonians (Saladoans) and ancient Peruvians From these facts we may suppose that there was a migration from East Asia to America

There is no evidence from Behring's Strait down to South America, that any leprous inoculation took place through this migration If any leprous inoculation into Peruvian populations took place, it must have been either through the Spaniards or, as Le Plongeon assumes, directly from India It could not have come through the islands of Japan, that is preceding their occupation by the present Japanese race, for the Ainos, as long as history knows anything about them, never were afflicted with leprosy, and they are immune to-day

We must therefore conclude that if leprosy came from India to America, it must have come by another route than that which brought syphilis

(To be continued)

A Second (1) Case of Ocular Diphtheria Treated by Sero-therapy By Dr H Coppez (*Journ de méd et de chir de Bruxelles*, November 24) A detailed description is given of this case to emphasize the special character of the stage of repair following the injection of serum The false membranes, says the author, disappear more or less rapidly and leave behind them healthy tissue There is no period of suppuration or repair The disease is cured at the outset The disappearance of the false membranes takes place in inverse order to their appearance "They seem to melt like a snowflake in a ray of sunlight," is the picturesque expression of Professor Coppez, or in more scientific terms, they seem to disappear by a process similar to that by which they came It is superfluous to dwell longer on the important rôle played by sero-therapy in the treatment of occular diphtheria Thanks to the injections of antitoxin, we are in a fair way to check the invading progress of pseudo-membranous exudates Better still, the last two stages of the malady may be suppressed, with all the dangers that accompany them In short, with this new treatment, when the false membrane has once disappeared the disease itself is conquered If treatment is begun at the proper time it will not be forty eight hours before all the menacing symptoms have disappeared, and the physician will be gratified by the rapid and complete recovery —DASTOT, in *Annales D'Oculistique*, January, 1895

ASSOCIATION NEWS

AMERICAN MEDICAL ASSOCIATION

Official Report of the Proceedings in General Session, 1895, of the Forty sixth Annual Meeting, held in Baltimore, Md , May 7, 8, 9, and 10, 1895

May 7—First General Session

The Association convened in the main auditorium of the new Music Hall, and was called to order at 10 30 a m , by the President, Dr Donald Maclean, of Detroit, Mich

Prayer was offered by the Right Rev William Paret, M D , Bishop of Maryland

The President invited all ex Presidents and Vice Presidents to seats on the platform, and among those who complied with the invitation were Drs N S Davis of Chicago, Henry O Marcy, of Boston, W B Rogers, of Memphis, Jas F Hibberd, of Indiana

President Maclean then introduced the Hon F C Latrobe, Mayor of Baltimore, who delivered the following

ADDRESS OF WELCOME

Ladies and Gentlemen —It is an agreeable duty, in fact, a great pleasure, for me to have the honor of extending to the members of the American Medical Association a sincere welcome to Baltimore Although by profession a lawyer, no one has a greater or more profound respect for the sister profession of medicine than myself Both of our callings are occasionally slandered, in fact, some have been bold and bad enough to call us necessary evils I once knew an old lady who had never been sick, who said ' If I should be taken ill send first for my lawyer, then for my doctor, and when they get through with me, go right off for my preacher "

But we members of these learned professions have the proud satisfaction of knowing that among the men who have won honor in the land and who have added to the fame of our people none are more numerous than those who came from the ranks of medicine and law

We have looked forward, ladies and gentlemen, for some time to the pleasure of your visit We shall be glad to show you our hospitals, our asylums, our universities, our libraries and colleges, our monuments and our parks, and last, but not least, our city, whose people are ready and anxious to extend to our visitors a kindly and cordial greeting We especially thank you, gentlemen, for bringing such a large number of ladies with you Some one has said and, I think, with truth, that a man is always safer in traveling when accompanied by his wife

If I was a doctor and a patient contemplating visiting another country or great city consulted me on the subject, I am sure I could give him no better prescription Ladies, I extend to you a double welcome Should any of our visitors desire to see the seat of the municipal government I offer you a sincere invitation to visit the City Hall If the ladies will come, I hope they will bring the gentlemen with them

In the name of this city and its people, I bid you all welcome to Baltimore

Mayor Latrobe was followed by Dr Samuel C Chew, who, on behalf of the Committee of Arrangements, welcomed the Association for the local profession

Dr Chew was warmly received on rising to speak He spoke in part as follows

Gentlemen of the American Medical Association —The medical profession of Baltimore tenders to you a most cordial and fraternal greeting Eight and twenty years have passed since this city was last honored by your presence here, and the changes which in that time have taken place in the Association, and in the world around us, are a measure of the changes—happily advances in knowledge—which have occurred in medical science Since then a whole generation of physicians has largely passed away Another generation has come into existence, so that of those active and strenuous workers in the profession who are here today many had then not entered it, and some no doubt were unborn

The old order has changed and yielded place to the new, and, if such difference exists in our Association, how different, too, were our surroundings at that time In 1866 the population of the United States was 35,000,000, now it is nearly if not quite, 70,000,000 Baltimore when you were last gathered here, was a city of about 250,000 souls, and now she numbers 500,000 But a more important change in its interest to our profession than mere increase of population is found in the fact that this city has become one of the chief centers of medical education in the country, and as such attracts here about one thousand medical students every year

Again, at your former meeting here the swell of the storm of civil conflict had not yet wholly subsided, some of its sad results were in many places still manifest and flagrant, and among them was the retardation of medical progress For, if in the midst of arms the laws are silent, so too, the voice of science is hushed or lowered Peace is the atmosphere in which she flourishes and achieves her greatest triumphs

Dr William Osler then reported on behalf of the Committee of Arrangements, and offered the program as the entire work of the meeting He also announced the following receptions and entertainments

Tuesday, May 7

1 Section Dinners
2 Reception at Dr Robert W Johnson's
3 Reception at Dr Howard A Kelly's
4 Reception by Dr Julian J Chisolm

Wednesday, May 8

Hospitals open for inspection University of Maryland, Baltimore Medical College, College of Physicians and Surgeons, Baltimore University Reception at Johns Hopkins Hospital, 8 to 10 p m

Thursday, May 9

Fête Champêtre at Sheppard Asylum, 5 to 7 p m Reception at New Music Hall, 9 to 12 p m

The following Clubs offered their privileges to the members of the Association during their stay in Baltimore Atheneum Club, University Club, and Catholic Club To the ladies, "The Arundel Club"

President Maclean then delivered his **Address**, which was punctuated throughout its delivery with applause

Dr J Milton Duff, Pittsburg—I move that the thanks of the Association be tendered to the President for his able address, and that it be referred to the Committee on Publication

Seconded and carried

Dr A L Gihon, Washington, D C —I move that that part of the President's Address which pertains to a Bureau of Public Health be referred to the authorities at Washington who are engaged in establishing such a bureau Seconded

Dr Quimby, New Jersey—In order to make the matter a little more effective, I move, as an amendment, that the portion of the President's Address alluded to be referred to a committee of three, with Dr Gihon as Chairman, to present it to the authorities at Washington Seconded

Dr Gihon—I differ with Dr Quimby I do not think the authority of three men would be greater, and I am satisfied to let it go as coming from the President of this Association alone, and in his own words

Dr Quimby withdrew his amendment

The President then put the original motion, which was carried

The Permanent Secretary read a communication from the Judicial Council as follows Decision of the Judicial Council of the American Medical Association in the case of the Medical Society of the State of Pennsylvania, versus the Trustees of the Journal of the American Medical Association

" Having examined the testimony brought before it, the Judicial Council of the American Medical Association find some objectionable advertisements have inadvertently appeared in the Journal of the Association and have given the Board of Trustees and Editor of the Journal official notification of the fact

Signed, H Brown, President, *pro tem*

Attest, John B Roberts, Secretary "

Dr Ferguson asked if the communication was open for discussion, to which the President replied in the negative, and decided that this action was final

Dr Solis Cohen of Philadelphia, offered the following

Resolved, That the report of the Board of Trustees be made the special order for to morrow Wednesday, immediately after the report of the Committee of Arrangements, and that it then be referred without discussion to a special committee of three, who shall report on Thursday morning in the place now assigned to the report of the Trustees Seconded

Dr E F Ingals of Chicago—I have no objection to that resolution except this, that the report will not be ready to be made to-morrow

Dr Solis-Cohen—I have introduced that resolution at the request of a number of members of the Association, not only in Pennsylvania but in various sections of the Union They consider that the conduct of the Journal of the Association is one of the most important subjects which can come before this meeting They wish it discussed calmly, deliberately, at a certain time, and with accurate data before them

Dr John B Hamilton, of Chicago—Mr President, I rise to a point of order

The President—Please state your point of order

Dr Hamilton—The gentleman is not speaking to the question, but is discussing the action of the Board

Dr Solis-Cohen—I am speaking to the resolution The object of this committee is to digest the report, to consider the criticisms that have been offered publicly, and to further consider what the Trustees have to say in relation thereto calmly, deliberately, without prejudice, and then report to the Association at a time when it can again be calmly discussed by the Association with all the necessary data before it It is to prevent hasty judgment, favorable or unfavorable, that this resolution is offered It is offered as a means of peace, as a means of carrying out the will of the Association, as a means of elevating the Journal of the Association to the proud position that it ought to occupy as the leader and not the follower of the medical press of the United States (Applause) Therefore we ask that this resolution be adopted

Dr Graham, of Chicago, also stated, as a member of the Board of Trustees, that the Board would not be able to report at the time mentioned

Dr J Cochran, of Alabama—I move that the resolution which has been presented be laid upon the table Seconded

Dr Hamilton—I rise to a point of order The Board of Trustees being a standing Board, authorized by the Constitution of the Association, its report can not be referred to a special committee, except by unanimous consent

The President—The point is well taken

Dr Ferguson, of Troy, N Y —I rise to a question of information I understand that the resolution offered by Dr Cohen does not call for a reading of the report of the Board of Trustees, but that it is to be presented to a committee, and then the whole matter goes over, so that the action of the committee can be simultaneous with the actual reading of the report It is well for the Association to understand this If there is to be a committee appointed, and that committee is to act upon the report, it is as well that it should be appointed, so that during the preparation of the report they may be taken into the meeting of the Board of Trustees, and then we shall not have to wait until the eleventh or twelfth hour for their action

The President then put the motion to table Dr Cohen's resolution, which was carried

Dr E F Ingals—In order that every member may be satisfied, I would move that a committee be appointed at this time to consult with the Board of Trustees and to make such suggestions as they deem necessary, if there are no objections

Dr Cohen—That is perfectly satisfactory to us, and I therefore second the motion

Dr Cochran—I desire to say a few words with regard to the resolution To my mind this is a very important question It is a proposition to appoint a committee to sit in judgment upon our Board of Trustees It would seem as if you can not trust the Board, that the Board of Trustees are a lot of bad boys, that they are not fit for the positions they occupy, that therefore you want to appoint a committee to make them behave themselves I feel that this is dishonoring to the Board of Trustees (Applause) If I were a member of the Board and such a resolution was passed, I would immediately resign It is all child's play to be appointing masters over them Who is this Board of Trustees? I am going to read the names of men you all know They are men you respect, they are men who have the confidence of this Association and of the medical profession, as well as of the people of this country They are not school boys, they are not fellows with shady characters, but men of great reputation One of them is Alonzo Garcelon Another is Perry H Millard (Applause) Another is J W Graham (Applause) Others are E E Montgomery, E Fletcher Ingals, John E Woodbridge, J T Priestley, Joseph Eastman, and David W Graham (Loud applause) Now, you ask to have a committee appointed to supervise the work of these men I say it is dishonoring to them, and they ought not to submit to it, and as an Association we ought not to put this indignity upon them I believe in being virtuous, I believe in the ten commandments, in the Golden Rule, and all that, but there is such a thing as being too virtuous (Laughter) I want to say right here, that advertisements of the character that appear in the Journal of the Association appear in every medical periodical that is published in the United States of America—every single one, I believe, certainly the majority of them These periodicals are all conducted by honorable men, and they are at least a fair sample of the profession, and yet you want to make rules and impose regulations upon the Journal that you do not require anybody else to submit to (Applause) There is another point with regard to the Board of Trustees that you might bear in mind, and it is this, that the American Medical Association is not a chartered body It can not sue and be sued The Board of Trustees are responsible for the expenses incurred in the publication of the Journal I have mentioned the names of the gentlemen composing the Board, and I hope this motion will be laid at rest by one vote I therefore move, Mr President, that it be laid upon the table Seconded

The reading of the resolution was called for, and it was read by the Secretary

The President put the motion to table and declared it carried, when Dr Cohen rose and called for a division There were 138 votes in favor of tabling the motion and 108 against it The President then declared the motion carried

The following was offered by Dr P H Millard

Whereas, Membership in the medical corps of the Navy of the United States from having been through its high professional attainments once eagerly sought by graduates of medical colleges has ceased to be attractive to them, so that it is no longer possible to fill its vacancies, and

Whereas, It is believed that this is due to the inferior rank given to entrants to the corps and their assignment, when at sea, to quarters in the steerage, with undergraduates of the Naval Academy and civilian paymaster's clerks, while the young medical officer of the Army begins his career a grade higher and in the commissioned officers' mess, and

Whereas, The professional requirements and qualifications, the professional duties and obligations of the medical officers of the Army and Navy are identical therefore be it

Resolved That the attention of the Senate and House of Representatives of the United States be invited by the American Medical Association to this inequality, and that the Naval Committees of the two Houses be urged to inaugurate such legislation as shall confer upon the officers of the medical corps of the Navy the same status, pay and emoluments *as are now accorded to the medical officers of the Army*

Resolved That this resolution be printed and copies of it certified by the President and Secretary of the Association shall be sent to the President of the United States, the Secretary of the Navy and to every member of the LIVth Congress

Dr X C Scott, of Ohio—I move that the resolution be adopted as the sense of the Association Seconded and carried

The following was presented by the Business Committee

"The Business Committee requests the Association to direct the officers of the Sections, at their afternoon sessions of Tuesday, to appoint members to serve as substitutes on the Business Committee in place of those who are absent during this meeting of the Association

"The Business Committee also requests the Association to make this order such as will operate at all future meetings of the Association, or, if necessary, to amend the By-Law relating to the Business Committee to this effect"

Dr John M Duff, of Pittsburg—I move that the request of the committee be granted Seconded and carried

A telegram was received from Dr Rand, of Oregon, asking that the Section on Dermatology and so much of the work as pertains to genito-urinary diseases be consolidated

Dr Henry O Marcy, of Boston—I move that this consolidation be made Seconded and carried

Dr Leartus Connor, of Detroit—In order to act intelligently on a definite, distinct and difficult matter, it is necessary to acquire certain information The information we desire to obtain is this What proportion of the members of the American Medical Association prescribe proprietary medicines, and what proportion do not? If we can settle this by collective investigations, then we shall know where we stand, and we can definitely understand what the Trustees ought to do in the matter of advertising If the majority of the medical profession of this Association do not prescribe proprietary medicines at any time, then the Trustees ought not to admit any advertisements respecting them into the Journal, but if they *do* prescribe them, then the majority ought to rule and the question be stopped Therefore, I move that a committee of three be appointed who shall take means to ascertain during the coming year the proportion of members of the Association who prescribe proprietary medicines

Dr A L Gihon—If such a committee is appointed, I hope Dr Connor will be appointed its chairman The resolution amounts to this, that one-third of us are either ethically pure, or that two thirds of us are practically empirics, whatever we may be theoretically

Dr Edward Jackson, of Philadelphia—If I rightly understand the matter, it is Dr Connor's intention to settle the question which has been raised in the Association, and I would move, as an amendment, that we say ' secret proprietary remedies " The question at issue is not with reference to proprietary remedies in general Seconded

Dr E D Ferguson, of Troy—I do not think it is possible to poll the members of this Association to ascertain just exactly what their conduct is in that respect There is a broad distinction here which has not been made by Dr Connor The fact that a new remedy has been discovered, and that some one outside of the profession has made it proprietary, is not by any means a logical or right interpretation of our Code of Ethics The questions of proprietary and secret preparations are two very important ones, and we should keep clearly in mind as to whether we prescribe phenácetin, a simple, definite chemic compound, or antikamnia, which I have never done, nor have I prescribed a secret remedy of any kind Inasmuch, therefore, as this resolution does not in my judgment carry with it a desire to get at the truth but that it tends to create confusion, that it wishes to bring into the arena the discussion of points that do not properly belong here, I move that the whole thing be laid upon the table Seconded and carried

After the various State delegations had been instructed to meet immediately after the adjournment to select members of the Nominating Committee, the Association, on motion, adjourned until Wednesday, 10 A M

May 8—Second General Session

The President called the Association to order at 10 30 A M

The minutes of the preceding session were read and approved

The Permanent Secretary read the following

Upon the request of the Section of Materia Medica and Pharmacy, the General Business Committee has directed me to inform you that there are in attendance at the meeting of the Association, delegates from the American Pharmaceutical Association, with the request that you extend such courtesies to said delegation as you may deem proper

Signed, L D Bulkley, Secretary

Dr Henry D Holton, of Vermont—I move that the delegates of the American Pharmaceutical Association be invited to take seats on the floor and given the courtesies of the Association Carried

Dr Osler, for the Committee of Arrangements, announced several invitations

The Permanent Secretary read the list of the Committee on Nominations, as reported from the several State delegations

Committee on Nominations

Alabama, J C Legrange
Arkansas, L P Gibson
California, H B Ellis
Colorado, J W Graham
Connecticut, W S Watson
Delaware, R G Ellegood
District of Columbia, C H A Kleinschmidt
Georgia, F Westmoreland
Illinois, John B Hamilton
Indiana, J L Thompson
Iowa, J T Priestley
Kansas, M B Ward
Kentucky, T B Satterwhite
Maine, T W Foster
Massachusetts, A H Tuttle
Maryland, G H Rohé
Michigan, D Laferte
Minnesota, P H Millard
Missouri, I N Love
Montana, G W King
Nebraska, M L Hildreth
New Jersey, I N Quimby
New York, E D Ferguson
North Carolina, C J O'Hagan
Ohio, A B Walker
Oregon, H R Holmes
Pennsylvania, W M Welch
Rhode Island, W R White
South Carolina, T J McKie
Tennessee, J C Reeve
Texas, S E Hudson
Vermont, D C Hawley
Wisconsin, W H Washburn
U S Navy, T C Walton,
U S Marine Hospital Service, G W Stoner

Dr. Gihon, Chairman of the Rush Monument Committee, read his report as follows

REPORT OF CHAIRMAN OF RUSH MONUMENT COMMITTEE

The committee to which has been intrusted the collection of a fund for the erection of a monument to the memory of Doctor Benjamin Rush, in the City of Washington, on the part of the members of the medical profession of this country as an evidence of their appreciation of the eminent services of this distinguished patriot-physician of the Revolution, begs to report that this fund now amounts to $3,094 39, of which $3,000 are invested in bonds and mortgages bearing 5 per cent annual interest Your committee regretfully admits that this is but a sorry showing beside the success of the American Surgical Association in collecting all the funds they required for the erection of their projected statue to Dr Samuel D Gross of Philadelphia, and can not but experience a sense of mortification that an association of such limited membership as the latter should have accomplished so much in so short a time while the entire body of physicians in America as represented by the American Medical Association, has done so little for this enterprise, upon which they entered with enthusiasm eleven years ago

It is almost an ungracious reflection upon the intelligence of the members of this Association to repeat in detail the reasons why a statue should be erected to Benjamin Rush The most eminent of the living members of our profession have eulogized him as 'the greatest physician this country has ever produced,' —as "the founder of scientific medicine in America '—as one of the most notable men of his time whose views were half a century ahead of the times" The great medical authorities of Europe have given him unstinted praise as the American Fothergill, the American Sydenham, the American Hippocrates—best of all, as the American Rush it being unjust, ' says this eulogist, 'to compare him with any other ' Go to the Department of State at Washington and ask to see the Declaration of Independence which converted thirteen British colonies into thirteen sovereign American States and you will read the name of Benjamin Rush written upon it one hundred and nineteen years ago, that of the only practitioner of medicine who signed that immortal document, and for that act alone we practitioners of medicine, ought to commemorate him by this monument Or, read the proceedings of that convention which framed the Constitution that bound these thirteen sovereign American States into this United States of America, and again you will see the handwriting of Benjamin Rush, of Pennsylvania The history of the United States records this man as one of the most active, fearless and pronounced of its rebel founders In committees in conventions in the Continental Congress, to which he was elected when timid men fell out, Dr Rush was conspicuously present and his eloquent voice was heard in a cause which meant the freedom of his country or his own death by the halter In the early history of our profession in America the name of Rush is so interwoven with the warp of events that it is an ever prominent figure in the fabric. He was civilian practitioner hospital physician and military surgeon he was the standard authority among alienists, at home and abroad down to our very day he was an advanced sanitarian before hygiene was admitted to be a legitimate branch of medicine he was a thoughtful epidemiologist in his youth, when other youths had not yet quit their rudiments Eloquent as a lecturer, unrivaled as a teacher, prolific as a writer, a professor at 21 in that great school which he did so much to make great he died, practicing his profession, at 68 from typhus pneumonia while fearlessly encountering, studying and combating the frightful pestilence of 1813 Many of you have liberally contributed to monuments to generals, slain upon the battle field, but was there ever a soldier who faced a deadlier foe than this with greater courage than his, or died more bravely, honorably and gloriously than he died, trying to save other men s lives instead of seeking their slaughter

Where in the long line of our professional worthies can you find one more worthy of being portrayed to posterity as the representative physician of America? He studied medicine as thoroughly as it could be studied at that day giving seven years to it after receiving his degree of Bachelor of Arts, he taught medicine to more than two thousand private pupils he was a part of the social life of the community in which he was established and by which he was regarded as a wise counselor, intrepid and undaunted in public assemblies during the critical birth throes of the Republic and as brave a soldier as ever honored the uniform he wore Whether in his boyhood his adult manhood, or his always virile old age, through his whole career and in the circumstances of his death the profession of medicine will find only something honorable and something to honor He and he alone impersonates the principles this monument is intended to weld in imperishable bronze Fortunately, Sully in his splendid portrait painted soon after Rush's death the original of which is one of the most treasured possessions of the Pennsylvania Hospital has preserved for us the benevolent features and dignified form of this great, good doctor

Your committee does not seek to detract in any measure from the high estimate of that grand surgeon—"the father of American surgery" he has been aptly termed—whose projected statue is an accomplished fact, and the Chairman of this Committee has least of all, the thought of minifying in any degree one whose personal relations with him were of a peculiarly affectionate character, but, according him all praise, and rejoicing that he is to be so commemorated, your committee reminds you that he was of our own day, while Benjamin Rush was one of the fathers of the Republic, whom Gross himself regarded with reverential and respectful homage

Were your committee less earnest and enthusiastic in the belief that the monument to be erected to this greatest of American doctors should be one befitting a body of professional men, now numbering about one hundred and ten thousand, it would advise that the $3,000 in its hands be expended for a simple bust to stand upon a plain granite pedestal but it is unwilling by doing so to make ineffaceable record of the fact that this great army of one hundred thousand members of the noblest of the learned professions was unable or unwilling to contribute more than an average of less than three cents apiece to honor a man of whose like but one in a century appears in the history of a nation, and especially does it shrink from this conclusion of its work since the successful completion of the undertaking of the young association, which numbers but one in every thousand of the medical fraternity of the country, and which was only organized four years before this body unanimously and enthusiastically

Resolved, that this Association undertake to erect a statue to Dr Benjamin Rush in the City of Washington by the members of the profession of medicine in the United States '

It is to the infinite credit of the members of the American Surgical Association and their supporters that they have thus honored one who deserved all honor from his colleagues, pupils friends and admirers it will be to our infinite discredit if we do less As Chairman of the Rush Monument Committee, I can and do most heartily congratulate my old and highly esteemed friend Professor Mastin of Mobile, the Chairman of the Gross Monument Committee and I hope to be able to accept the cordial invitation he has already tendered me to witness the unveiling of a work which has been with him and his associates a veritable labor of love There need be no envy of their success on our part but only increased incentive for us to do what has become with every year that has passed, a more solemn duty for us, and an increasing labor of love

It is quite a different matter than fraternal emulation, when it is announced that a monument to Hahnemann is soon to be erected at the National Capital, and if the beautiful artistic design for that monument which I have seen shall be adopted and executed, more than ever will it be incumbent upon the physicians of America to place no inferior memorial of their own great archiater beside that of a foreign theorist whose vagarious travesties of medical truth have at most served to enrich a few pseudo-physicians who have been willing either ignorantly, unconsciously or deliberately to mountebank medicine for the gain it has brought them With such a rival in the field, it behooves us to be up and doing, and we come now to ask your very serious, thoughtful consideration of the ways and means of doing The spasmodic contribution of a few dollars by a few individuals under the influence of personal appeals, at these annual meetings is not enough A few days ago I completed forty years' service as a commissioned officer in the Navy, and in a few months the legal limitations of age will retire me from active service, and I can never again appear before you as the official representative of a corps with which I have been identified for nearly half a century, nevertheless, I am willing to make the erection of this statue the earnest effort of my future, as it has been my past, but I beg of you now, if you believe this work can be more speedily and satisfactorily accomplished in other hands, to relieve me of the charge, since if I am to continue this work it must be done with no longer delay, for at three score and two, no man can count upon years, or months, or days, ere his name shall be called on the muster roll of the dead Already since the inauguration of this project, Austin Flint, your honored President, who appointed the original committee of seven, and three of these seven, Henry H Smith, of Philadelphia, Robert A. Kinlock of Charleston, and John C Murphy, of St Paul, have gone beyond the possibility of witnessing its completion, as have Lewis P Bush, of Wilmington, Del , Surgeon M K Taylor, U S Army, of Fort Sill, Ind Ter , and I fear one or two others of their successors from whom I have not heard

I, therefore, submit to you to decide at this time, and there is no more important subject for your consideration at this meeting, what you, members of the American Medical Association, and you, delegates, who are here representing National, State, county and municipal organizations all over this country, are willing to do as active coadjutors in this effort to erect a monument to Dr Benjamin Rush, as illustrative of all that is great and good in medicine, and typifying at the Capital of the Nation the part that our noble profession has had in the foundation of this great Republic

Your committee should be reorganized and enlarged by a representative from every National, State, Territorial and district organization, these to act severally as chairmen of sub-committees, composed of members from each county, municipal and local society in their respective departments, States, Territories and districts An efficient working general committee must be composed only of members willing to discharge their onerous duties The experiment of issuing a coin-card to individual physicians, with a printed appeal for the inclosure of a silver half dollar, and a prepaid return envelope, has already been practiced with unsatisfactory result Perhaps personal letters to every medical practitioner in the Section of the several members of the committee, inclosing an appeal for contribution, and a prepaid envelope addressed to the secretary of the committee, may bear better fruit, but the immediate expense of printing and distribution will have to be borne by the Association upon vouchers certified by the chairman and secretary of the committee, the sums thus advanced to be subsequently refunded annually from the amounts thus collected

After the reading of the report, Drs Henry D Holton, W H Daly and John A Wyeth made eloquent appeals for subscriptions looking toward the erection of the monument, and a number of members subscribed various sums

Dr Holton then moved that the report be accepted, and that the thanks of the Association be tendered to the Committee for its work Seconded

Dr I N Quimby, of New Jersey, moved, as an amendment, which was accepted, that the report be published in the Journal Carried

Dr J W Hoff moved that each delegate to the Association be appointed a committee to collect funds for the Rush Monument from their fellow practitioners and transfer the amounts to the Treasurer of the Committee on Rush Monument at as early a day as practicable Seconded and carried

The President then called for the reading of the Report of the Permanent Secretary The report was read, and is as follows

Report of the Permanent Secretary

Gentlemen —In obedience to the instructions adopted at your last meeting, the inclosed circular was sent to the several State medical societies, and also to each county or district society known to be in affiliation with these As yet, I have to receive replies from a number, but I have been able to obtain sufficient data to report quite fully on that part relating to the first resolution There appears to be a general awakening in nearly every State, and several have set on foot earnest efforts to increase not only the membership of the State body, but to produce an improvement in that line in the respective local societies Notably I may mention Pennsylvania, which has appointed a committee to attend to this matter, and already two societies have been revived and made efficient, and many others have much increased their membership The interests of the American Medical Association have also been kept in sight, and all who were not connected with it have been urged to join

In the matter of arranging the dates of meeting so as not to interfere with the meetings of this Association, nothing has yet been done, though I have addressed a second communication in certain instances urging attention to this and to the subject of "a uniform standard of professional requirement for admission to the practice of medicine and to aid as far as possible, in advancing the scientific status of the same by the appointment of State Examining Boards, independent of the teaching faculties of the medical colleges" I hope next year to report that action has been taken at least by some on this very important matter

The several State medical societies through their secretaries have furnished me the following information

Alabama An auxiliary society in every county in the State, 66 Generally the best men in the county are members Membership in the county society constitutes membership in the State association In all, 1,067 members

Illinois Membership 695

Idaho Membership 35

Iowa Membership, 600 Fayette County, 34, Cherokee County, 22, Clinton County, 34, Washington County, 22, Southwest Iowa, 58, Harrison County, 7, Dubuque Medical, 30, Cedar Valley Medical, 139, Council Bluffs Medical, 19, Botna Valley Medical, 31, Wapello County, 26, Story County, 17, Medical Association N W Iowa, 33, Big 4 ("Four"), 41, Warren, 15, North Iowa Medical, 30, H and S Medical, 9, Iowa Central, 30, Lyon County, 18, Central District, 49, Jackson County, 14

Kentucky Membership 455

Louisiana Membership 386

Maryland Membership 456

Massachusetts 2,000 Barnstable District Medical, 25, Berkshire, 50, Bristol North, 40, Bristol South, 60, Essex North, 80, Essex South, 120, Franklin, 25, Hampden, 90, Hampshire, 40, Middlesex East, 40, Middlesex North, 90, Middlesex South, 245, Norfolk, 210, Norfolk South, 25, Plymouth, 50, Suffolk, 470, Worcester, 130, Worcester North, 40.

New Hampshire Membership 290

New York (State Medical Association) King's County, 100

North Dakota Membership 200 Cass County, 25

Pennsylvania Membership, 1,300 Allegheny County, 200, Armstrong, 21 Beaver, 30, Berks, 50, Blair, 52, Bradford, 21, Bucks, 41, Butler, 33, Cambria, 34, Carbon, 19, Centre, 23, Chester, 31, Clarion, 24, Clearfield, 23, Clinton, 24, Columbia, 20, Crawford, 22, Cumberland, 23, Dauphin, 43, Delaware, 36, Elk, 16, Erie, 30 Fayette, 44, Franklin, 31, Greene, 13, Huntingdon, 18, Indiana, 17, Jefferson, 35; Lackawanna, 49, Lancaster, 92, Lawrence, 16, Lebanon, 13, Lehigh, 34, Luzerne, 73, Lycoming, 57, McKean, 11, Mercer, 28, Mifflin, 16, Montgomery, 56, Montour, 15, Northampton, 51, Northumberland, 31, Perry, 22, Philadelphia, 639, Schuylkill, 58, *Somerset*, 24, *Susquehanna*, 30, *Venango*, 32, Warren, 26, Wayne, 18, Westmoreland, 67, Work, 31, Washington, 40

Rhode Island Membership 248

Vermont Membership 192

Wisconsin Membership 400

District of Columbia Membership 370

Arizona Membership 40, Mariposa County, 20, Yavapai County, 10

In addition to the replies received from the State societies, a large number of county or district societies have sent me very full reports Several of these appear to have taken hold of this subject with enthusiasm, and are determined to enroll in their ranks every eligible member of the profession practicing in their bounds

The following States have the county or district societies in affiliation

Alabama, full list of societies, Arkansas, only partial list, California, 20 counties, Colorado, 9 counties, Connecticut, 8 counties, Illinois, 50 local societies, Indiana, 70 counties, Iowa, 21 county and district, Kansas, 1 district, Kentucky, no list, Maryland, 3 districts, Massachusetts, 18 districts, Michigan, 20 districts, Minnesota, 3 counties, Montana, 1 district, Nebraska, 15 districts, New Jersey, 21 counties, New York, 2 counties, Ohio, 54 districts, Pennsylvania, 54 counties, this State has 2,500 members in affiliation, South Carolina, 6 counties Of none of these have I been able to secure anything certain, Tennessee, no information, though I am assured that a number of district societies are in affiliation, Texas, 30 districts are reported, but only a few have replied to my inquiry, Utah, no State body, 2 district societies, West Virginia, 1 society

The following States have only State medical societies. Any local societies that may exist are *not* in any way connected with the State society

Delaware, Florida, Georgia, Idaho, Louisiana, Maine, Mississippi, Missouri, Nevada, New Hampshire, New Mexico, North Carolina, Oregon, Rhode Island, South Dakota, Vermont, Virginia, Washington, Wisconsin

In addition, the Territories of Arizona, Indian and Oklahoma have Territorial societies Medical Association of the District of Columbia

Should a future report of this nature be demanded, I hope to be able to give the membership in numbers of each State body, and with it the number of eligible physicians in each State Respectfully, W B Atkinson, M D

On motion of Dr Quimby, the report was accepted

The President—We will now listen to the report of the Treasurer

The Treasurer, Dr Henry P Newman, of Chicago, then read his report as follows

TREASURER'S REPORT

In submitting my first annual report as the Treasurer of the American Medical Association, I desire to offer a word of explanation in regard to some matters which have, perhaps, been less satisfactory than could be desired, and a word of suggestion as to the furtherance of our mutual interests

At the time of my election, last June, the business pertaining to this office came at once into my hands, while I did not receive the books of the former incumbent until two months afterward This delay created so much confusion in matters of record and book keeping that it was found impossible to reduce the office work to a system immediately And when the books were received, the task of comparison and revision, augmented by the ever increasing current work, became very onerous and required careful personal attention supplemented by the aid of a clerical expert to bring about a smooth adjustment of our running gear

It is now generally known that the office of the Treasurer has been moved to Chicago and there should be no more cause to complain of the carelessness of members continuing to send in their dues to Philadelphia, causing the former Treasurer unnecessary labor and annoyance, and more or less confusion in their individual accounts

The clerical difficulties arising out of these conditions are lessening with the passing of the year, and with the adoption of a new method and the coöperation of the members will soon be impossible altogether

Having made the financial interest of the Association a careful study since my incumbency and endeavored to reduce the business of the office to as practical, accurate and economical a basis as is possible, I have these suggestions to make with the view of simplifying our methods, and at the same time attaining the greatest possible efficiency

In the first place, I would strongly urge upon the Association the expediency and the necessity of changing the fiscal year, which now runs from June to May, or May to June, shifting according as the meeting is held in the North or South, to coincide with the calendar year, subscriptions running in future from January to December inclusive

Many members who have paid toward the close of the past year, (in March or April), their subscriptions being past due, make the quite natural mistake of supposing that they are paying for 1895-96

This necessitates much correspondence and some misunderstanding on the part of individuals, and I feel sure that a change of the fiscal year would result in nothing but benefit to the Association

The next suggestion has in view the abrogation of the so-called "three-year rule," by which members are kept in good standing two years after their subscriptions have expired This is no doubt with generous and kindly intention, but it is manifestly unfair to those who pay annually and whose contributions support the institution with all its benefits and privileges

There are always in any body of men the few who would be inclined to take advantage of such lenience, and in the minds of such there seems to be an impression that the dues of this Association are payable only once in three years

In conclusion, I would congratulate the Association upon the excellent financial showing of the past year, the receipts being for the eleven months proportionately greater than those of any other year, notwithstanding the small meeting at San Francisco

This surplus has been, I believe, judiciously expended in the better equipment of our representative JOURNAL which is fast becoming one of the leading publications of the medical world, and to the circulation of which, and to the efforts of its able Editor, the growing success of the Association is largely due

Respectfully submitted

DR H. P NEWMAN, Treasurer, in account with the American Medical Association

1894		DR
Aug 11.	To cash, Dr R H Plummer, from delegates and members at San Francisco meeting	$ 2 184 91
" 21.	To cash, Dr R J Dunglison former treasurer	6,565 78
1895		
Apr 30	To cash, Journal A M A, advertising contracts, subscription fees, etc., etc to date	15,425 74
" 30	To cash, Journal A M A. insurance for damage to Journal office by fire	579 00
" 30	To cash dues paid by members to date	10,560 67
	Total	$85,266 10
1894		CR
July 10	By cash, Dr Perry H Millard, Trustee expenses of attendance at annual meeting, San Francisco	$ 110 00
" 21	By cash, C F Johnson, stenographic work at San Francisco meeting	250 20
" 25	By cash, Dr F E Montgomery, Trustee, expenses of attendance at annual meeting, San Francisco	170 25
" 27	By cash, Wm Whitford, stenographic work for Journal A M A	15 50
" 28	By cash, Casey & Sons desk for Treasurer's office	40 00
Aug 20	By cash, dies, stamps etc	5 95
" 21	By cash, book for membership roll	9 00
" 28	By cash, Dr E F Ingals Trustee, expenses of attendance at annual meeting San Francisco	55 00
Sept 5	By cash Western News Co, letter press, etc	10 42
Oct 30	By cash, postage to date	110 00
Nov 27	By cash, Dr C G Comegys, expenses on Committee of Secretary of Public Health	45 20
27	By cash, Dr E F Ingals book keeping expenses	8 50
" 28	By cash Dr A Garcelon, Trustee, expenses of attendance at Trustees' meeting, Chicago	119 00
Dec 12	By cash Treasurer, clerk hire to date	125 00
" 31	By cash, Eagle Stamp Works, stamp and numbering machine	9 85
1895		
Mar 1	By cash, Western News Co., letter press desk	6 01
" 4	By cash, Dr I E Atkinson advance payment on rent of hall at Baltimore for May meeting	50 00
" 5	By cash, Dr J W Trueworthy, Los Angeles, Cal, dues in excess refunded	5 00
" 30	By cash, Dr Wm B Atkinson, Secretary, expense account	195 44
" 30	By cash, Dr H P Newman, Treasurer, sundries to date	19 50
Apr 2	By cash, postage	50 00
" 30	By cash, Treasurer, clerk hire	135 00
" 30	By cash, expense account of Journal A M A to date	29 344 97
" 30	By cash balance on hand	4,881 28
	Total	$85,266 10

Approved by the Auditing Committee

On motion, the report was accepted

The Business Committee presented the following

To the American Medical Association —Recognizing that one of the main functions of the General Business Committee, as defined in the By-Law creating it, is "to promote the welfare of the Sections," your Committee took under consideration the proposed amendment to Article II of the By-Laws, relating to the creation of a Section on Orthopedic Surgery

After a full and careful consideration of the matter the following resolution was adopted

Resolved "That in the opinion of the General Business Committee the organization of a Section devoted to Orthopedics is not expedient"

Signed, L D BULKLEY, Secretary

On motion the report was adopted

The Permanent Secretary read the following

COMMUNICATION FROM THE SECTION ON STATE MEDICINE

BALTIMORE MD, May 7, 1895

To the President and Members of the American Medical Association —The following suggestion embodied in the address of the Chairman, Dr Liston H Montgomery, read before this Section this afternoon, was upon motion unanimously adopted, and referred to the General Session of the Association with the request that it be read there, and that similar action be taken regarding the appropriation as follows

"Permit me to suggest that we advise and recommend to the Association in General Session, ere its final adjournment, that the perpetuity of the Special Committee appointed by the American Medical Association, be continued, to memorialize Congress to establish another branch of the Federal Government, to be known as the Department of Public Health with a Medical Secretary of same That this committee be clothed with additional substantial authority and with the request also from this Section that sufficient financial aid from the Treasury of the Association be appropriated, which should not be less than $1,000 for the ensuing two years to defray the necessary expenses of the said committee" Very respectfully submitted,

CHAS H SHEPARD, M.D, Secretary

It was moved and seconded that the report be referred to the Business Committee

DR JOHN B HAMILTON—Mr President, I move to amend that motion, that so much of the resolution as refers to an appropriation be referred to the Board of Trustees Seconded

DR CONNOR—I think this matter ought to be referred to the Business Committee for consideration in a deliberate manner, then the Association can better understand what to do with it

DR DUDLEY S REYNOLDS, of Kentucky—I move as a substitute, that the report or suggestion contained in the address of the Chairman on State Medicine be referred back to the Section to formulate something more definite for our consideration Seconded

Dr Liston H Montgomery, of Chicago—I move that the substitute be laid upon the table Seconded and carried

The original motion of Dr Hamilton was then put by the President and carried

On motion of Dr E F Wilson, of Ohio, it was unanimously

Resolved, That this Association most respectfully appeals to the colleges of the country to at once carry into execution the provisions of the four years curricula of study Be it further

Resolved, That we deplore the efforts being made to amend the rules governing the curricula of study in the Association of American Medical Colleges looking to the defeat of the present requirements governing the granting of degrees

Dr Wm E Quine, of Chicago, then delivered the "Address in Medicine"

On motion of Dr E S Talbot, of Chicago, the following were elected members by invitation Drs S A Hopkins, Boston, Mass, J G Humslen, Baltimore, Md, W A Miles, W S Twilley, Jos Roach and W J Waters, of Baltimore

An invitation was read from the Mississippi Valley Medical Association to attend their session at Detroit, Michigan, in September 3-6, 1895

On motion, the Association adjourned until Thursday morning, 10 o'clock

May 9—Third General Session

The Association was called to order by the President at 10 30 A M

Mr Thompson, Chairman of the American Pharmaceutical Association, was invited to a seat on the platform

The Permanent Secretary read the following from the Judicial Council

Baltimore, May 9, 1895

DECISIONS OF JUDICIAL COUNCIL

The protest of members of the Allegheny County Medical Society of Pennsylvania against the registration of a former member of that society and the appeal of said member against the decision of the Allegheny County Medical Society is referred to the Medical Society of the State of Pennsylvania for adjudication, with privilege of appeal to the Judicial Council of the American Medical Association after said adjudication

The protest against registration of members of the Cleveland Medical Society is referred to the Ohio State Medical Society for adjudication, the applications for registration are to remain suspended until the case has been adjudicated by the Ohio State Medical Society, and if any member of the Cleveland Medical Society has already been allowed to register his money is to be refunded

The charges and protest against a physician of St Louis are not in proper form to come before the Association

John B Roberts, Secretary of Judicial Council

The Permanent Secretary began to read the minutes of Wednesday, when Dr Holton arose and moved that further reading of them be dispensed with Carried

Dr E E Montgomery, of Philadelphia, read the report of the Board of Trustees

Report of the Board of Trustees

Baltimore, May 8, 1895

Mr President—The Trustees in presenting their Annual Report, have the honor to direct your attention to the fact that it covers but eleven months, as the meeting of last year was in June

The receipts from all sources have been		$36,245 90
The expenditures were		30,884 82
Leaving a balance on hand of		5,361 08
The receipts of the Journal have been		
From advertising	$12,545 01	
From subscriptions	1,569 75	
From reprints	1,674 67	
From cash sales	203 21	
From Ins paid on account of fire	579 00	
	$16,572.54	
Expenditures—By cash, H P Newman		$16,009 04
" " Deposit in bank		452 77
" " Expense		88 23
Balance in Office		22 50
		$16,672 54
Expenditures by Treasurer		29,844.97
Cost of the Journal to the Association		12,772 48

Of this amount $6,291.24 was expended for new machinery

The Journal now possesses a plant worth about $10,000

The Trustees consider the success of the Journal during the monetary depression of the past two years as a subject upon which you should be congratulated The Journal contains more reading matter than any similar publication in this country

The favorable outlook for the future, has led the Trustees to institute measures for the immediate improvement of the Journal through more frequent illustrations and the extension of its editorial scope The Trustees confidently assert that none of its contemporaries present advertising pages that are as free from objectionable material

During the year no advertisements of secret remedies have been accepted that were not accompanied by a formula, but to still further comply with what appears to be the desire of a large number of those interested in the highest success of the Journal, the Editor, with the termination of present contracts, has been instructed to accept no advertisements of medicinal preparations, the proprietors of which do not give a formula containing the official or chemic name and quantity of each composing ingredient to be inserted as a part of the advertisement

The work of the office was greatly discommoded by a fire March 31, the money loss from which has been fully covered by insurance

The Trustees respectfully recommend that the fiscal year of the Treasurer and the Journal be made to correspond with the calendar year, believing the adoption of such plan will greatly simplify the keeping of the accounts and better enable them to make yearly comparisons Now, the fiscal year varies from eleven to thirteen months in different years

In conclusion, the Trustees desire to express their appreciation of the untiring and loyal devotion of the Editor, of the earnest coöperation of the various employes who uncomplainingly have borne the discomforts incident to moving the office, and resulting from the fire which recently occurred in the Journal office Respectfully submitted,

Alonzo Garcelon, John W Graham,
E Fletcher Ingals, Perry H Millard,
Joseph Eastman, John Eliot Woodbridge,
David W Graham, E E Montgomery

The report elicited considerable applause during its reading

The President—You have heard the report of the Board of Trustees, what will you do with it? Before taking action upon it I have a suggestion to make This report is a very important one and may require some little time to discuss We have here this morning the prospects of an excellent address on surgery by Dr Wheaton, and I fear that if we enter into a discussion of this report many of the members will become tired and leave the hall before the Doctor has a chance to read his address I know from personal experience that when a man takes the trouble and pains to prepare an address, he likes to have a good audience to listen to him, and I would therefore suggest, with the consent of the Association, that we now hear Dr Wheaton's address and discuss the report of the Trustees immediately afterward

Dr Solis-Cohen—Mr President, I object I do not desire at this time to interfere with, but to facilitate the business of the Association The Association is to be congratulated, as well as the Trustees, that it can at last stand upon an honest platform The report deserves our hearty approval Their work should be emulated (Applause) Now we can go forward, when the time arrives, and demand that every other American medical journal shall make its pages clean from the shame of patent medicines, and unless they do this they should not receive the support and subscriptions of the members of the American Medical Association (Applause) On behalf of the Pennsylvania delegation, as commissioned by them officially, and unofficially on behalf of the hundreds of members who came to me, as well as of various medical societies, to express their desire that we go forward to cleanse the Journal, I move the approval of the report of the Board of Trustees (Applause) Seconded and unanimously carried

Dr C A Wheaton, of Minnesota, then delivered the "Address on Surgery"

On motion, a vote of thanks was extended to Dr Wheaton for his able address

Dr W C Spalding, of New York City, offered the following

Mr President and Members of the Association—With the object of increasing the bond of fellowship that already exists in this honorable body, increasing its scientific advancement, and as an incentive to larger membership, the reader has been thinking seriously as to what course we might take in order to make our organization more widespread, more attractive and better attended at our annual meetings

It has occurred to me that if this honorable body would give its attention to the question of increase and growth, that we can very greatly add to our numbers and, at the same time, by adopting a comparatively slight increase in our dues put ourselves in such a position that in a few years we may have a local habitation as well as a name, among scientific bodies

I would like to call the attention of the Association to a plan to which I have given considerable thought, thinking that if carried out it would surely add to our prestige as a body, our good fellowship as a fraternity, our opportunity for clinical and other scientific demonstration

This plan is to increase the annual dues of each member $1, which is to go to a purchasing and building fund to be kept until it has reached an amount large enough to purchase the site, as may be agreed upon by this body, when it shall have reached a sufficient amount for a payment upon or a complete purchase of such location as this body by its vote shall determine What we desire is a fine National hall of our own, to which we may gather annually, with the feeling upon the part of each member that it is ours and is our home to which we shall all gather yearly and perhaps as the years roll by we may consider the advisability of establishing in connection with it a place of comfort and rest for those of our profession who in giving to others have robbed themselves of the fruits that should have blest their old age, those whose faculties have been dimmed through hard pursuit of relief to suffering humanity, and those who by disease and accident have been disabled from further pursuing their chosen profession, but who in all honorable means have endeavored to advance the cause of scientific healing of their fellow men

Dr B B Godfrey, of Michigan, in accordance with the above, offered the following

In reference to the foregoing resolution I make the following motion

That the members of the Association raise their annual assessment $1 for the purpose of creating a building fund, that the President be hereby empowered to appoint a committee consisting of one permanent member from each State and territory represented in this Association, whose duty shall be to solicit subscriptions to this fund, and act as an advisory board to the trustees of this Association, in reference to the investment of the fund as it shall accumulate That the President shall appoint the committee in the following manner as nearly as possible one-third for one year, one-third for two years and one third for three years, and at the expiration of their terms their successors be appointed for three years This committee shall report at each annual meeting of the Association the amount of the subscriptions received in their respective territory

Dr N C Scott, of Ohio—I move that the matter to which we have just listened be laid over until next year, inasmuch as it is virtually changing the By-Laws of the Association Seconded

Dr P H Millard, of Minnesota—I move, as a substitute, that the whole matter be indefinitely postponed This Association is the representative body of the profession of America We have entirely too many associations at the present time and to raise funds for the purpose outlined is not practicable It is the duty of this Association to father its Journal, to build it up It is the greatest journal of the Western continent to-day (Applause) Its Trustees have been making a struggle financially to put both the Journal and the Association upon their feet, and we desire adequate financial support The moment we divert funds for the purpose named it will be a sad day so far as the future usefulness of the Journal is concerned (Applause)

Dr John B Roberts, of Philadelphia—I move to amend Dr Millard's resolution, that it be referred to the Business Committee Seconded and carried

Dr A Koenig, of Pittsburg—The Board of Trustees having cleansed the Journal of secret advertisements, I rise to move a vote of confidence in the Trustees for their action in now eliminating objectionable advertisements from the pages of the Journal Long may they live (Applause) Seconded

Dr John B Hamilton, of Chicago—I think it is unfair to allow the statement that has just been made to go on record without a little correction and explanation The question decided on Monday was not a question of approval or disapproval of the Trustees, but whether they should be forced to make a report or not, and whether a committee should be appointed over them, and it is hardly fair to imply that the Association one day approves an act of the Board of Trustees, and then on the next day approves another act of a different kind The vote of confidence was passed on Monday and again to-day when its report was adopted. I therefore make a motion to reconsider Seconded

The President—If the Association has already voted its good will and confidence in the Board of Trustees, it seems to me it is all that is necessary

Dr Koenig—The Association can scarcely go on record as not approving the action of the Board of Trustees

Dr Jerome Cochran, of Alabama—I rise to a question of personal privilege in regard to this matter The gentleman, who offered the last motion, seems to have had my speech in mind when he made it When I spoke on a previous occasion, it was not my object to eulogize the action of the Board of Trustees in eliminating the advertisements of private remedies, but to vindicate the Trustees themselves, to have this Association assert that they had placed the matter in the hands of the Trustees, that they were willing to trust the Board of Trustees, that they did not require to have guardians appointed for their guidance in this matter That was the object of the speech I made (Applause)

Dr Koenig—Three years ago in Detroit the Board of Trustees were requested to exclude objectionable advertisements from the pages of the Journal They did not do it Now they have done it The other day a statement was made that no other journal in the country excluded these advertisements I know to the contrary, and the journals live, and why should not the Journal be an ideal one, representing the best element of the profession of this country, by excluding quack advertisements from its pages We do not need their filthy money We do not want it (Loud applause)

On motion of Dr Cohen, the motion to reconsider was tabled without objection

Dr E D Ferguson, of Troy, N Y—I rise to request a ruling from the Chair on matters that may come before the Association under the head of Miscellaneous Business It is with reference to amendments to the Constitution and By-Laws, as printed on pages 8 and 9 of the program (The following are the amendments referred to)

AMENDMENTS TO THE CONSTITUTION AND BY LAWS

(Offered in previous years and laid over from 1893 and 1894)

Offered by **Dr C A L Reed**

Amend Article II, Section 1 of the Regulations, by inserting after the words United States, the words 'The Dominion of Canada, Labrador and Newfoundland,' and that such other changes be made in the phraseology of the Regulations and By Laws as to make the same conform to this contemplated enlarged jurisdiction of the Association

By **Dr I N Quimby**

That Thursday morning s General Session be omitted, and the time be devoted to Sectional work

By **Drs John Morris** and **J G Kiernan**

Amend Section 7 of the Constitution entitled, "The General Business Committee, as follows 'It shall be the future duty of the General Business Committee to make and present the nominations for the officers of the Association and its Standing Committees and recommend the time and place for the meeting of the Association

The General Business Committee of the Association shall perform all duties hitherto performed by the Committee on Nominations which is hereby abolished All sections of the Constitution and By laws, or parts thereof, inconsistent with the amendment are hereby repealed

By **Dr F F Dow**

Amend By Law No XI, relating to the Judicial Council The second clause of paragraph 8 shall be amended to read as follows 'The decisions of said Council on all matters referred to it by the Association shall be reported at the earliest practicable moment, and shall be final unless revised by the Association "

By **Dr A B Hosmer**

Whereas, The constantly increasing number of papers on general surgical subjects presented each year at the Surgical Section of this Association the reading and even restricted discussion of which prohibit the introduction of any considerable number of papers on strictly orthopedic subjects which might not prove of universal interest to the general surgeon and

"Whereas There are already a sufficient and rapidly increasing number of members of the Surgical Section of this Association especially interested in this branch of surgery to warrant it therefore be it

'*Resolved* To amend Article II of the By Laws, by the addition under the heading Sections, and after 12, Physiology and Dietetics, the following 13, Orthopedic Surgery '

By **Dr F F Dow**

Amendment to the Constitution to be known as Article VIII, entitled "The Code of Ethics "

' The relations of the physician to the patient, to the public, and to the profession require that he shall be of good moral character, and in his personal and professional conduct without reproach that he shall avoid pretense and notoriety that he shall properly qualify himself for professional duty by broad and liberal studies in letters sciences and arts that he shall employ reasonable and reputable methods of practice that he shall respect the laws of the State that he shall encourage efficient means for the enlightenment of public opinion regarding the responsibilities of medical men and the relation of the citizen to public health for the cultivation of medical education for the promotion of the interests usefulness, and honor of the profession, for the emulation, concerted action, and friendly intercourse among those engaged in it

' Substituting the Roman numerals IX for VIII

"All Articles, By Laws, and Codes inconsistent with this amendment are hereby repealed "

By **Dr J H Rauch**

"That on and after July 1, 1897, no one will be admitted to membership in the American Medical Association who has not studied medicine for four years, and attended four annual courses of lectures of at least six months' duration "

By Dr J T Priestley
"The entire report on Constitution, etc , as offered in the report of Dr Holton at San Francisco "

Dr Ferguson (resuming)—Before I ask the decision of the Chair in reference to this matter, I desire to make one or two statements concerning the amendments and their history at the San Francisco meeting last year All of the amendments herewith were before the meeting at that place, and by reference to the heading we will find some of them have been laid over since 1893 The amendments were considered at San Francisco, were handled in the various parliamentary ways customary in such matters, and after they had been thoroughly considered and had been acted upon negatively, a final motion was made that all of the amendments to the Constitution and By-Laws and Code of Ethics be indefinitely postponed Whether any one of these had been up or not at that meeting, the resolution to that effect was broad enough to cover all Some of the resolutions are entirely impracticable, particularly the one introduced by Dr Rauch, which would prohibit a large majority of the profession from membership in the Association , that if they should happen to fall out of membership, it would prevent them from ever getting back into it again In order to simplify matters, I ask for your ruling, sir, as to whether all of these amendments to the Constitution and By-Laws down to the last one (Dr Priestley's) are not properly before the Association

The President—My opinion is that they are not proper subjects for consideration here in the present state of affairs The course of the Association with regard to them before made it, if not absolutely unparliamentary, at all events, so entirely unwise that it seems to me best to take that course in the matter, and I therefore rule (with the exception of Dr Priestley's amendment) that they are not proper subjects for discussion at the present time

Dr Cochran—On what different basis does the last amendment stand ?

Dr Ferguson—I am going to explain that The last amendment, Mr President, is rather peculiar It is an amendment to the Constitution, etc , which is extremely indefinite I know the members of the Association—most of them at least—will recall the whole subject for the last three or four years of our history It has been incubating since that time At the San Francisco meeting a large majority of the members voted for indefinite postponement , but we were told from the floor that it was like Banquo's ghost, it would come up and come up, again and again It would not down (Laughter) Some one in the audience at the San Francisco meeting held up his hand, was recognized by the President, and called the attention of the Chair to an amendment to the Constitution I endeavored to find out what that amendment was I felt that we ought to know Some of my neighbors informed me that it was a simple matter , that it had no significance whatever I went home with that feeling I read the printed proceedings of the meeting in the Journal, and I had no more light on the subject Finally, I wrote to the Secretary, and some months after the meeting I found out that the amendment to the Constitution had been but a small slip of paper sent in as the entire report of the committee of which Dr Holton was Chairman (Laughter) Many of you will doubtless recall that that report, as presented at the San Francisco meeting, was not exactly the report as printed in the Journal

Dr Dudley S Reynolds, of Louisville, Ky —Mr President, I rise to a point of order

The President—The gentleman will please state his point of order

Dr Reynolds—Your entire ruling, sir, is that these amendments are not properly before this meeting, and I hold, sir, that matters not properly before the meeting are not debatable

The President—The point is well taken

Dr Reynolds—I now move you, sir, that the amendment offered by Dr Priestley be indefinitely postponed Seconded and carried

Dr Cochran—There is another amendment to the Constitution which is not on the program It belongs to the class of new amendments, and was offered by Dr Quimby, its object being to strike from the Code of Ethics the clause prohibiting the patenting of surgical instruments I forget the number of the Section I move that that amendment be taken up for consideration Seconded

Dr N S Davis, of Chicago—Mr President, it is certainly with a great deal of reluctance that I ask to be heard for a few moments at this time, not that I regard the subject under consideration of more importance than those that have come before the meeting, but I want to speak a word or two in regard to what I deem fundamental and essential to the perpetuation, the character, and honor of this Association (applause), which should represent by delegation the profession of this broad country as it was originally designed—a true, representative organization, having in view two grand objects the promotion of fraternal feeling and social intercourse, and the science and art of medicine (Loud applause) These objects and no other advance the science and art of medicine They carry with them the education of the profession, social intercourse, the mingling and fraternal feeling from all parts of our country, contributing immensely to the status and influence of the profession Now, in looking over the Transactions and following these meetings from the first convention down to this, with only very few exceptions, almost every year somebody has taken it upon himself to alter our Constitution and By-Laws He is continually picking up something to find fault with (Applause) Now, for heaven's sake we have got a Constitution and By-Laws that provide for a representative body We have an open door that allows every physician in good standing in his local medical society to become a member—a door broad enough to receive the unanimous indorsement and support of the English-speaking people of the globe (Applause) Our Association is founded on the same principle as that of the British Medical Association No man, who has discovered anything of value as a remedial agent, is allowed to keep it secret If it is a medicine calculated to do good to humanity, he has to make it known freely to his professional brethren and to the world (Applause) Again, if any man devises an instrument that is useful for surgical or other purposes, it is his business to let his brethren know about it There should be no secrets (Applause) It is the province of the physician to alleviate human suffering I have arisen, Mr President, to move that all of the amendments to the Constitution and By-Laws referred to be indefinitely postponed Seconded and carried by a large majority

Here Dr J T Priestley arose and offered a new amendment containing some of the same amendments which had been previously disposed of by the Association

Dr X C Scott—I rise to a point of order in reference to the amendment just presented By previous action of the Association all amendments to the Constitution and By-Laws have been indefinitely postponed, and hence no one of those amendments can be re-introduced at this meeting That sir, is my point of order

The President—My ruling is that inasmuch as action has already been taken in regard to the various amendments, they can not be re-introduced at this meeeting

Dr John B Roberts—There is a point here that most of the members do not understand It is the privilege of every member of the Association, the youngest as well as the oldest, to introduce at any time an amendment to the Constitution, and I, sir, appeal from the decision of the Chair If I understand the matter correctly, the decision of the Chair is that these amendments can not be brought forward at this time I will ask the President to state his reasons for such a ruling, and then I will present mine, and then we can vote upon whether the opinion of the Chair shall be sustained

Dr N S Davis—I wish to call attention to what seems to me an important point in regard to offering amendments The habit has grown up of late which seems to imply that anybody has a right to propose an amendment to the Constitution and By-Laws These amendments are given to the officers, and are then laid over Nobody knows what they are Now, my own idea is that no one has a right to propose an amendment to the Constitution, unless that amendment is written out clearly, plainly stating the sections he proposes to amend, and after it is proposed it should be stated from the Chair definitely, who shall ask for a vote to either accept it or to lay it on the table

Dr W H Daly, of Pittsburg—I concur with Dr Davis that it is not right for amendments to be laid over to incubate for a year without knowing what they are The proper way, it seems to me, is to read them and then lay them over

The President—I have no objections to the amendments, but when you have voted to indefinitely postpone them, and then move to re-consider the subject, it strikes me as a rather peculiar way of treating the matter

Dr N S Davis—The only way in which subjects of the same character can be re introduced at this meeting, after having voted for indefinite postponement, is to move a reconsideration of the vote of postponement, and then we will get that before us

Dr James F Hibberd, of Indiana—My understanding about the parliamentary rule in regard to this matter is this *that if the matter be a series of resolutions and they* are laid over, you can take some part or distinct proposition and consider it, but I do not propose to consider what has been indefinitely postponed I merely desire to state my recollection of the parliamentary law, which, I believe, is just as I have given it

Dr A L Gihon—It is a rule in mathematics that the greater includes the less

Dr Hibberd—That may be where you come from (Laughter)

Dr I N Quimby—Any subject that has been indefinitely postponed during this session, or any amendment germane to it, can not be re introduced at this time

The President—I adhere to my original ruling Dr Roberts appeals from the decision of the Chair I will put the motion of appeal

A Member—I move that the motion to appeal from the decision of the Chair be laid upon the table

Dr Roberts—You can not lay a motion to appeal on the table If some gentleman here has seen fit to offer an amendment to the Constitution, I claim that he has a right to be heard, a right to have it read, and then laid over No President has a right to shut off any member We can protect him by appealing from the decision of the Chair The Chair must then state his reasons, and the gentleman who offers the amendment or amendments must also state his objections to the ruling of the Chair The Chair must then state to the Association, " Shall the Chair be sustained?" It is certainly an unjustifiable proceeding to shut off any man from introducing an amendment *to the Constitution which* is to lie over He has a right to have it read, to have it spread upon the minutes, and no President has authority to shut him off (Applause)

President Maclean then put the motion of appeal, and the Chair was sustained

The President—I endeavor *to give the members of the* Association every possible privilege and I shall do my best to protect them If any amendments are to be introduced, they shall be read from the stage and laid over, and voted on at the next meeting But, gentlemen, I do object to resolutions or amendments being quietly introduced and then laid *over as a trap for my successor* (Applause, and cries of That's right!)

The Section on Obstetrics and Diseases of Women reported the following named officers for the ensuing year Chairman, J Tabor Johnson, Washington, D C , Secretary, Reuben Peterson, Grand Rapids, Mich

The Section on Physiology and Dietetics reported the following named officers for the ensuing year Chairman, H Bert Ellis, of Los Angeles, Cal , Secretary, Henry Salzer, Baltimore, Secretary

The Section on Dermatology and Syphilography reported the following named officers for the ensuing year Chairman L Duncan Bulkley, New York City, Secretary, T C Gilchrist, Baltimore Md , Executive Committee, L A Duhring, Philadelphia, Pa , A H Ohmann Dumesnil, St Louis, Mo A E Regensberger, San Francisco, Cal

The Section on State Medicine reported the following named officers for the ensuing year Chairman, Charles H Shepard, Brooklyn, N Y , Secretary, Elmer Lee, Chicago, Ill , Executive Committee for one year, C A Lindsley, New Haven, Conn , for two years G W Stoner, U S M-H Baltimore, Md , three years L H Montgomery, Chicago, Ill

The Section on Neurology and Medical Jurisprudence reported the following named officers for the ensuing year Chairman, T D Crothers, Hartford, Conn , Secretary W J Herdman, Ann Arbor, Mich , Executive Committee, Daniel R Brower, Chicago, Ill , W X Sudduth, Minneapolis, Minn , W S Watson, Fishkill, N Y

The Section on Dental and Oral Surgery reported the following officers for the ensuing year Chairman, R R Andrews, Cambridge, Mass , Secretary, Eugene S Talbot, Chicago, Ill , Executive Committee, M E Fletcher Cincinnati, Ohio , Eugene S Talbot, Chicago, Ill , A E Baldwin, Chicago, Ill

Dr Jerome Cochran, Chairman of the Committee on Secretary of Public Health, reported as follows

To the President of the American Medical Association —After the elaborate report made by this Committee at San Francisco last year, our report for the present year need not be very extensive, and we beg to report briefly as follows

1 Our facilities for doing the important work intrusted to us have been strictly limited by want of funds, the Association having failed to adopt the resolution-offered last year for an appropriation not to exceed four hundred ($400) dollars to defray the necessary expenses of the committee, so *that such expenses as we have incurred* have been paid out of our own pockets

2 In November we addressed a communication to the officers of State and other medical societies and associations urging them to appeal to the members of their respective organizations to write to their members of Congress in both Houses, requesting them to give their support and their votes in aid of the passage of our bill To this communication we received very few responses But it was published in a considerable number of medical and sanitary periodicals, and doubtless accomplished some good A considerable number of medical and sanitary periodicals also published editorial articles in advocacy of the proposed legislation, and these articles have attracted more or less favorable attention among the members of the profession, and have led some of them to appeal to their members of Congress, but not to such general concert of action by the whole body of the profession as we have desired

3 In December, some members of the committee visited Washington City for the purpose of ascertaining just what could be done toward *pushing our enterprise to a successful* result We found a good many members of Congress who promised us their cooperation whenever a favorable time could be *found for the consideration of our bill, but all* agreed that it would be impossible to accomplish anything during the continuance of the LIII Congress

4 It is *evident from this brief review of the situation*, that to secure the passage of our bill to create a Department and Secretary of Public Health, much vigorous work will be required, *and in order that this work* may be done it will be necessary for the Association to place at the disposal of the committee an adequate amount of money for current expenses We will have to do a considerable amount of printing We will have to enlist the active assistance and coöperation of all the State and municipal medical societies We will have to keep up a very extended correspondence We will have to enlist the active assistance of the medical and sanitary periodicals of the *country Sometimes, for* perhaps months at a time, we will need the services of a competent clerk It is for the Association to say whether it is prepared for an effort of this magnitude

To this end we had prepared a resolution recommending an appropriation, but as this object has been accomplished by the action of the Association on the recommendation of the Section on State Medicine, it is not necessary to offer this resolution

All of which is respectfully submitted

(Signed by the Committee)

On motion, the report was received

Dr J M Keller, of Arkansas—Is there any By Law as to when the report of the Committee on Nominations shall be made?

The President—Not to my knowledge

Dr Keller—I desire to offer the following resolution

Resolved That the report of the Nominating Committee shall be made on Thursday morning I do it for the reason that if we wait until Friday two-thirds of the delegates will have gone to their homes and when the report is brought in there are only a few men to vote on it—at least, only a handful of men Seconded

Dr Daly—I move that the resolution be referred to the Business Committee

Dr Davis—This proposition is *not an alteration of the* By-Laws, but simply a resolution as to whether the Committee on Nominations shall report at a definite time each year, and I see *no objection to it*

A Member—I would suggest that the mover of the resolution be a little more specific as to time—say after the reading and adoption of the minutes on Thursday morning

Dr Holton—This resolution, if adopted, will cut down our meeting to three days instead of four (Cries of No! No!) *The experience of those gentlemen* who have been appointed on the Nominating Committee in the past has been that the committee is usually not able to report on Thursday, and the only way to keep members here is to keep them in suspense, to know whether they have got any office or not

Dr L D *Bulkley—Mr President*, I rise to a point of order All new matter should be referred to the Business Committee, and their action is to be revised or concurred in by the Association The Business Committee meets daily to consider matters that come before it If this resolution is referred to the Business Committee, we can report to morrow *morning*

Dr Keller—I hope in the future the Nominating Committee will make its report when most of the delegates are present, and not wait until Friday when a large number have gone to their homes

Dr Quimby—This is a resolution that justly and legitimately belongs to the Business Committee It is simple in its nature, therefore it is not necessary to go through the red tape to send it to the Business Committee, the Judicial Council, or any other place The Nominating Committee could have reported this morning

Dr Reynolds—I hope, sir, that you will not rule that the Nominating Committee can not report when it has already completed its deliberations and is ready to do so I know by precedent, sir, that in former years this committee has made its reports on Thursday morning We have no law prescribing just what day the committee shall report I hope, therefore, as the committee is ready to report, that there will be no objections to hearing the report now (Applause)

Dr Hibberd—I move the Committee on Nominations be instructed to report "instanter" Seconded

Dr Bulkley—I insist, Mr President, that this matter should come before the Business Committee as prescribed in our By-Laws

Dr Reynolds—This resolution provides for the future conduct of the Nominating Committee, and Dr Hibberd's motion is the one I insist upon We want the committee to report now

Dr E Jackson, of Pennsylvania, asked if the whole thing was not out of order and demanded the ruling of the Chair

The President—It is not compulsory that this matter be referred to the Business Committee

Again, Dr Bulkley rose to a point of order

So many motions had been offered that Dr Cohen asked what was in order, to which the President replied, Dr Hibberd's motion

Dr Cochran—I think I can offer a solution of the whole trouble Let the resolution of Dr Keller with regard to the future action come under the rules of the Business Committee, but that does not preclude the report of the Committee on Nominations being made at this time

Dr Keller—I am satisfied to have that done

The Committee was then asked to report, but the Chairman not being present, no further action was taken

A report from Dr J M Toner, of Washington, D C, as Chairman of the Jenner Vaccination Centennial, offering his resignation was read, as follows

Washington, D C, May 8, 1895

To the President of the American Medical Association

Dear Doctor —Owing to continued poor health which renders me incapable of attending efficiently to the duties devolving upon the chairman of the committee of this body, authorized to provide a suitable program of exercises, occupying one day of the session of the meeting of the Association resolved to be held in Washington City in 1896, so as to appropriately celebrate the centennial of Dr Jenner's discovery, vaccination, I must therefore ask to be excused from this service

I request this in the interest of this, the most important discovery ever made in medicine, and believing that some more capable chairman will be able to make a brilliant success of this undertaking under the auspices of the American Medical Association, I herewith tender my resignation as chairman of the committee and request that some one else be named for the place The committee as originally constituted was composed of Drs J M Toner, N S Davis, T F Wood, J F Hibberd and H D Didama The decease of Dr Wood left a vacancy which I was authorized to fill, which I have done by naming Dr J S Billings

Trusting that the project of providing for the centennial celebration may be carried forward with success, I remain, dear sir, Your most obedient and humble servant,

J M Toner, M D

Dr N S Davis—Dr Toner, as chairman, has given the subject a great deal of attention while his health permitted, and I think it would be well to wait until we hear the report of the Nominating Committee to see whether Washington will be selected as the place of meeting in 1896, as originally agreed upon

Dr Cohen—If there is any member of the Nominating Committee present, I move that he be privileged to report in part or in full to the Association (Cries of No! No!)

On motion of Dr Millard, the Committee on Nominations was requested to report as to the place of meeting

Dr J E Reeves, of Tennessee, announced that Atlanta, Ga, had been agreed upon

Dr Millard then moved that the meeting of 1896 be held in Washington, D C Seconded

Dr Keller made a speech in behalf of Hot Springs as the next place of meeting, Dr Gaston one in favor of Atlanta, and Dr Howe, of New York, urged the selection of Niagara Falls

After some discussion, participated in by Drs Gihon and Keller, on motion of Dr N S Davis the whole matter was laid upon the table till the report of the Nominating Committee was made in full

The President—Some action should be taken with regard to the communication of Dr Toner in which he tenders his resignation

On motion, the resignation was accepted, and the committee empowered to fill the vacancy

On motion, the Association adjourned

May 10—Fourth General Session

The hour for the opening of the session having passed, on motion of Dr Taneyhill, Maryland, ex-President Dr N S Davis was called to the Chair The President and Vice-Presidents were all temporarily absent

The Permanent Secretary began to read the minutes, when, on motion, their further reading was dispensed with

President Maclean now entered and assumed his duties

Dr Henry D Holton, of Brattleboro, Vt, read the "Address in State Medicine"

On motion of Dr John B Hamilton, the thanks of the Association were tendered to Dr Holton for his able address

Dr John B Hamilton offered the following, which was adopted

Resolved That hereafter, the Permanent Secretary and the Treasurer shall proceed to the place of meeting one day in advance of the opening session, for the purpose of directing and facilitating registration of members and applicants for membership

Dr Osler, of Baltimore, offered the following resolution, which was unanimously adopted

Whereas, This Association learns with profound regret that the "Index Medicus" will cease to appear with the current issue, unless very substantial support is immediately given, and

Whereas, We recognize the value to our profession of this most complete bibliography and the loss the profession would sustain if it were discontinued therefore be it

Resolved, That this Association urge its members to individually support this publication with a view to its continuance until such time as more permanent provision can be made

The Committee on Section on Benevolence reported as follows

Report of the Committee on a proposed American Medical Benevolent Fund, to be raised by a Section of the Association for the benefit of the Widows and Orphans of Deceased Physicians

Brief reference may be made to undertakings of the kind in the United States and Great Britain whose aim it is to afford prompt and sure pecuniary help to distressed qualified physicians and their families, especially widows and orphans

British Medical Benevolent Fund The President of this Association, founded in 1836, is Sir James Paget, F R S A late report furnished by the courtesy of W H Broadbent, M D, Bart, shows that the whole of the money subscribed is available for the objects of the charity for which the British Medical Benevolent Fund is raised—many of them of utter destitution, and the relief given is not unfrequently all that stands between the recipient and the humiliation of accepting parochial relief The timely aid thus given has enabled the needy ones to look around and find means for the support of themselves and children Her Majesty Queen Victoria, the British Medical Association, and the Faculty of Physicians and Surgeons contribute to this fund

The first Medical Benefit Society in America for the relief of destitute physicians or their families was organized in Boston in 1858 The money distributed to beneficiaries amounts to $9,340, according to Treasurer Dr Francis Minot's report for 1891

Next was founded the American Mutual Medical Aid Association of Kentucky, in which an admission fee of $10, and annual fee of $2, secures to the family of a deceased member of the society $2,500, or to one sick, $5 per week

In 1875 was founded the New York Physicians' Mutual Aid Society, membership 350 Dr Blumenthal, a late President of this society, says of the work "The grief and sorrow assuaged by their benefactions no figures or words can express" Its most faithful supporters are bachelors of the medical profession

In 1878 was formed the Mutual Aid Society of the Philadelphia County Medical Society Dr Benjamin Lee, a late President, says of this society "It seeks to remove the reproach from the profession that they alone of all callings and crafts make no systematic provision for the relief of brethren in distress and for their destitute widows and orphans left dependent on the cold charities of the world "

The Medical Aid Society of the State Medical Society of Virginia levies an assessment of $1 on the occasion of the death of a member, to be paid over to the family of a deceased physician

These societies hold annual meetings, and require the applicant for aid to give name, date of graduation, college, means of support and cause of pecuniary distress, and in case of death of a Fellow of the Association, the address and application of the widow or orphans certified by two physicians It may be added, among prominent physicians in the United States who have given their support and money toward the endowment of a Medical Aid Fund may be named many ex-Presidents of the American Medical Association, viz the late S W Gross, Austin Flint Sr, John Hodgkin, and W T Briggs, Prof N S Davis Sr, Lewis Sayre, P O Hooper, Henry O Marcy and the eminent gentleman who at present presides over the Association, Donald Maclean, all of whom have officially declared, "that any practical plan to aid disabled physicians and their families deserves the favorable consideration and support of every member of this Association, and they will gladly favor such an object"

In closing this report your committee will venture the opinion, based upon the facts and proofs above given of the success of the Medical Aid Societies of Massachusetts, of Kentucky, Pennsylvania and of other States, that the time has come for this Association to undertake a like good work according as its wisdom may decide This appeal your committee would make especially to the Christian physicians of the Association who believe that "pure religion and undefiled before God and the Father is this, to visit the fatherless and widows in their affliction"—and, "if any provide not for his own, and especially for those of his own house he hath denied the faith and is worse than an infidel"

Finally, your committee believes that if a Section on Benevolence be engrafted upon the Association that ere the close of the nineteenth century its membership will be augmented, its fraternity strengthened and other National organizations, such as the American Public Health the Surgical and Gynecological, and the Military Surgeons' Associations of the United States will become cordial co-workers with us in this godly duty toward the needy ones of our profession

Respectfully submitted,

Frederick Horner M D, Chairman of Com

On motion of Dr Jackson, of Pennsylvania, the report was received, and the committee continued, with instructions to report a feasible plan at the next meeting of the Association

Dr E D Ferguson, of New York, Secretary of the Committee on Nominations, read the report of that committee, as follows

Report of Committee on Nominations

The Committee on Nominations met at 3 p.m, on Wednesday May 8 and organized by the election of Dr J E Reeves as Chairman and Dr E D Ferguson as Secretary

After some preliminary arrangements concerning the methods of selecting candidates, etc, the following list of candidates was selected

President, R Beverly Cole, California
First Vice President, J J Chisolm, Maryland
Second Vice President, C Le Grand, Alabama
Third Vice-President, Augustus C Clarke, Massachusetts
Fourth Vice-President, T P Satterwhite, Kentucky
Treasurer, Henry P Newman Illinois
Secretary, Frank Woodbury, Pennsylvania
Librarian, G E Wire, Illinois

Members of the Board of Trustees Alonzo Garcelon, Maine, I N Love, Missouri, James E Reeves Tennessee

Members of the Judicial Council N S Davis, Illinois, H D Didama, New York, John Morris Maryland, W E B Davis, Alabama, Daniel R Brower, Illinois, D W Smouse, Iowa, M B Ward, Kansas for three years W M Welch, Pennsylvania for one year

Address in Surgery, Nicholas Senn, Illinois
Address in Medicine, William Osler, Maryland.
Address in State Medicine, Geo H Rohé Maryland

Atlanta, Ga, was then selected as the place of meeting for 1896, and W F Westmoreland was designated as the Chairman of the Committee of Arrangements and J McFadden Gaston, Jr, as Assistant Secretary

James E Reeves, Chairman
E D Ferguson, Secretary

Dr G L Taneyhill—I move the adoption of all of the report except that pertaining to the place of meeting and the election of the Secretary

Dr Geo W Webster, of Chicago—I second the motion Carried

Dr Ferguson—With regard to the question of election of the Secretary, the point was raised as to whether the committee should have made any nomination at all There is provision in the Constitution that the Permanent Secretary shall remain in office until, either by death, resignation, or removal, by a two thirds vote of the Association a change shall take place Whether it is proper for the Committee on Nominations to bring up that question each year is a question Personally, I feel that it should not I therefore move that that portion of the report pertaining to the Permanent Secretary be not agreed to, and that the present incumbent remain in office

Several members seconded this motion

Dr I N Quimby—I have a few remarks to make, and I do so with reluctance because I know what I say will be a divergence from some of my best friends, but under the present circumstances, taking all the views into consideration of the long, faithful service of our present Secretary, which has been, gentlemen, thirty one years and without a single absence in all those times (applause), an unprecedented attendant upon our meetings, we ought not as a scientific body to cast him aside Let us do justice to our faithful hard-working men (Applause) I tell you, Mr President, that this magnificent Association whose foundation stone is principally the advancement of scientific medicine for the healing of the nation can not afford to do Dr Atkinson an injustice It can not afford to do a single member injustice, whether he be high or low Let the sentiment of this Association be *fiat justitia*—exact justice and mercy to every one, whether he be high or low, and let this Association sustain the present Secretary, at least for the present Let us not send him home as though he had some affliction, but let us try and make him feel happy I therefore second the motion that the present Secretary remain in office in the place of the one nominated

The President—Are you ready for the question? (Cries of Question! Question!)

Dr Osler—*Fiat justitia* for the Association is all right, but let the quality of mercy be not strained I stand here and say plainly and honestly before Dr Atkinson what I and many other members have said behind his back, that he is not an efficient Secretary of this Association, and that we have not found him so (Hisses, followed by applause) You may hiss if you will, but I unhesitatingly say that no more important step in advance will be taken by this Association than when it changes its Secretary (Cries of Question! Question!)

President Maclean put the motion that the present incumbent remain in office, and it was carried by a large majority

Dr I N Love—It having been determined that this Association has no power to elect its Secretary, I move that the Constitution be amended, so that in future the Secretary shall be elected annually Seconded

Dr Priestley—That is the point I offered in my resolution yesterday

Dr C W Brown, of the District of Columbia, moved to select Washington as the next place of meeting This motion was supported by Dr A L Gihon

Dr Jerome Cochran urged Atlanta, Ga After considerable discussion in which Drs Gihon, Gaston, Taneyhill, Cochran, Keller, Quimby Brown, Daly, Bishop, Reynolds, Scott, Davis, Garcelon, and Love participated, Atlanta was agreed to as the next place of meeting

Dr H Bert Ellis, of California, offered certain resolutions recognizing the members of the profession in New York regardless of their affiliation with the body which had abandoned the Code of Ethics

Dr N S Davis announced that to entertain these resolutions it would be necessary to alter the Constitution

The President decided that these resolutions were out of order

On motion, Drs Gihon and Ferguson were appointed a Committee to conduct the President-elect to the Chair

Dr R Beverly Cole, of San Francisco, was then conducted to the platform and received by the President, amid much applause

President Maclean, in introducing his successor, said "It gives me great pleasure not only personally but officially to present to you our next President, Dr R Beverly Cole, of San Francisco In doing so I extend to him the heartiest good wishes for his administration in this honorable office, and I wish to say that if at the next meeting the members of the Association treat him as generously, kindly and nobly as it has the retiring President, he will be a very fortunate, happy and very proud man " (Applause)

President Cole then addressed the Association as follows

"I apprehend that no man lives but that he at some time in his life has been overtaken by circumstances which paralyze his powers of expression Such is my position at this moment Any member would feel proud of being elevated to this exalted position by such a body of men, representing the brains of our profession of the North and South, East and West The compliment is one that is not only appreciated by my humble self, but my State will feel that it is the handsomest compliment and the proudest day in her history when it shall be wafted across the continent that I have been elevated to this exalted position (Applause) In this there is no egotism involved I am here as the representative of my State and coast I would not be here otherwise, and then if it be that her representative is elevated to this position, must it not follow that the State herself will feel proud of this compliment as expressed through her humble representative? I want to say here that I am perhaps one of the oldest members of this Association Many have been the voyages that I have made, that I might mingle with you, from the far off land where the sun goes down, but leaves the softening influence of its rays upon her people From that far-off land many have been the voyages I have made at a cost of three months' time But there was some attraction for me, and I leave it to you to divine what that possible attraction has been Since our facilities have increased I have attended the meetings almost regularly, with the exception that there was an interruption for four years of my visitations owing to impaired health Thank God I have been measurably restored, and that an opportunity has been furnished me to return to the fold and to receive this hearty recognition at your hands

"In my administration I shall endeavor to rule fairly, impartially, but you may depend upon one thing I will endeavor to understand clearly and intelligently every question as it may be presented and rely upon my intelligence and interpretation of the law in my rulings But there will be no hesitation I shall rule firmly, but to the best of my ability and understanding with the light before me (Applause) I beg of you, then, that should it be my privilege and yours to meet at Atlanta next year, I trust I shall have your entire support You may rely upon me doing my duty I want you to come to me and give me the benefit of your advice While in this exalted position, I am, so to speak, a little deity, but I want to tell you that I am but a man, subject to all the infirmities and errors of judgment that characterize other men, yet I feel that I can receive great assistance at your hands by timely advice, and this I now solicit With these brief remarks I again thank you for the distinguished honor that you have conferred upon my State through this humble individual " (Applause)

The President then appointed the following delegates to societies abroad W H Daly, J A Ouchterlonie, I N Love, C G Chaddock, L H Montgomery, A E Rockey, I N Quimby, and H H Bridle

Dr George W Webster, of Chicago, offered the following, which was unanimously adopted

Resolved, That a vote of thanks be tendered to the city officers, the Reception Committee, the Committee of Arrangements, the local profession and citizens and the public press for the hearty welcome, the magnificent entertainment, the unlimited, spontaneous courtesy and hospitality, the accurate reports of proceedings, during our pleasant sojourn in the Monumental City, also a vote of thanks to the President

Dr George H Rohe, of Maryland, submits the following amendments to the Constitution

1 After Par 8, of Article ii, insert the following

"*Active members shall consist of such permanent members as have attended three meetings of the Association and shall have all the privileges of delegates, so long as they conform to the regulations of the Association* "

2 Insert in line 6, of Par 6, Article iv, relating to duties of officers

"He shall, in conjunction with the Local Committee of Arrangements, make complete arrangements for the verification of the credentials of delegates, and for the registration of members He shall also prepare annually an accurate list of members of the Association "

3 That ordinance No 18 be amended by substituting "The Permanent Secretary" for "Committee of Arrangements "

The Secretary then read the

Report of the General Business Committee

Upon the request of the Section on Materia Medica and Pharmacy, the General Business Committee, recommends to the Association that the work in therapeutics be added to that of the Section, and that the name of the Section be changed to that of the Section on Materia Medica, Pharmacy and Therapeutics

Upon the unanimous request of the Section on Dermatology and Syphilography, the General Business Committee requests that the name of the Section be changed to that of the Section on Cutaneous Medicine and Surgery, as it is believed that thereby there will be greater interest excited in the work of the Section on the part of the general practitioner

The General Business Committee indorses the following recommendations from the Section on Materia Medica and Pharmacy

Resolved, That in view of the adoption of the metric system in the U S Pharmacopœia, this Section recommends the more thorough instruction of the students at the medical schools in the use of metric weights and measures, and further recommends that physicians, when writing metric prescriptions, always make use of the signs Grm and Cc to distinguish between quantities by weight and volume

The General Business Committee gives notice of an Amendment to Article —, Section vii, relating to the establishment *of the Committee, to the effect that, "officers of* Sections shall fill vacancies temporarily in their Executive Committees, to serve on the General Business Committee during the current meeting of the Association "

L Duncan Bulkley, M D
Secretary General Business Committee

To the American Medical Association —Recognizing their high responsibilities in regard to the sectional and scientific work of the Association, and the need of fostering it in every way possible, your General Business Committee gave long and very careful consideration to the resolution which was referred to it, making the regular time for the reception of the report of the Nominating Committee to be Thursday instead of Friday, as has been the custom In view of the amendment which has been proposed, devoting the entire day of Thursday to sectional work, omitting the General Session entirely on that day, and for many other reasons, your Committee unanimously resolved that it was not expedient to change the customary date of receiving the report of the Nominating Committee

On motion of Dr Cochran, the report was adopted with the exception of those portions which introduce changes in the By Laws, which must lie over for one year

The following resolutions from the State delegation of New Jersey were read and adopted

Resolved That the American Medical Association renews and hereby confirms its long standing allegiance to and defense of the letter and the spirit of the unamended Code of Ethics and etiquette of the American Medical Association, and further

Resolved, That any revision of that Code on the lines hitherto adopted or proposed, should be rejected by every regular practitioner of medicine *as being inimical to the honor of the medical profession* and subversive of the best interests of the people of the United States

Alex McAllister Chairman State Delegates of New Jersey

Report of Librarian

The following report of the Librarian was offered and accepted without being read in full

To the President and Members of the American Medical Association —Your Librarian begs leave to submit the following

During the past year all the books, etc , constituting the library of the American Medical Association have been transferred from Washington, D C, to the Newberry Library at Chicago, in accordance with the terms agreed upon at a former meeting A certified copy of this agreement is appended hereto

The report of the Librarian of the Newberry Library shows that our library consisted of 3,781 volumes, 3,708 pamphlets In accordance with the terms of our contract, these will be classified, bound, shelved, and for the first time in the history of our Association, be accessible to the profession

Now that a permanent home and proper care is assured for our books and journals, there is an abiding reason for continued and generous contributions from the members of the Association Respectfully,

George W Webster, Librarian

To the American Medical Association —The main part of the Library of the American Medical Association, now in the Newberry Library, filled seventy-four cases It was supplemented by the exchanges of the Journal office for the period, 1890–94, and by the exchanges sent directly to Dr Webster A rough count of the volumes and pamphlets gives the following figures volumes, 3,781, pamphlets, 3,708

Perhaps 95 per cent of the collection consists of periodicals, transactions and reports, of which the most of those published before 1885 are bound The arrangement of the unbound volumes is not completed, but the work has gone far enough to show that few, if any, of the sets are perfect

The percentage of single volumes is comparatively small, most of them being old books Among these are a number of works on cholera Some of the volumes have been ruined by damp, while others have been mutilated by roughly tearing off the covers, on the whole, however, the books and pamphlets are in a good state of preservation

Recent exchanges are represented to the number of 250 This includes nearly all the United States medical publications, some from Europe and many from the Central and South American States The medical and learned societies of Europe are well represented as are our own State societies The transactions of these societies are particularly valuable for library purposes

There is also a good showing of United States medical periodicals printed early in the century and coming down as late as 1850

The pamphlets consist largely of reprints from United States medical journals and of the publications of German universities, notably those of the University of Kiel There are also some early files of insane hospital reports

According to the terms of the arrangement entered into between the Association and the Trustees of the Newberry Library the volumes and pamphlets will receive a mark showing the source of acquisition It is hoped that the members of the Association will continue to manifest their interest in the Library by forwarding to it copies of their works

J V Cheney, Librarian

The Newberry Library Agreement

It is hereby mutually agreed by the Trustees of the American Medical Association and the Trustees of the Newberry Library that the American Medical Association shall permanently deposit in the Newberry Library its entire collection of books and pamphlets now in the Smithsonian Institution at Washington, or elsewhere and in consideration thereof the following arrangements are made and agreed upon namely

1 That the said books and pamphlets shall be treated by the Newberry Library in all respects as its own, and as it treats its own books, except that in labeling, stamping, or otherwise marking them, they shall, when received, be so marked as to show that they belong to the collection received from the American Medical Association and the said Association shall never thereafter have the right to remove said collection of books or any part thereof from the custody and control of the Newberry Library

2 That duplicates or other books may be exchanged or sold at the discretion of the Librarian or Trustees but that such books received in exchange or purchased with the proceeds of sale shall be marked or stamped as above provided for

3 That the American Medical Association shall hereafter continue to deposit in the Newberry Library all the books, journals, etc, donated or contributed to it from any and all sources except those given to reviewers for writing the reviews, and such journals as are needed to keep complete files in the office of the Journal of the American Medical Association All such books, etc, shall be treated in all respects as hereinbefore provided concerning the collection at present existing

4 That the Newberry Library shall defray the expense of transporting the aforesaid collection to the Newberry Library

Dec 5, 1894

The Newberry Library,
By Edward S Isham, First Vice President
Attest R B McConnel, Secretary
Geo W Webster, Librarian A M A, June, 1894,
A Garcelon President Board of Trustees
Attest John B Hamilton, Secretary

The following resolutions from the American Pharmaceutical Association were offered and adopted

In response to the resolution sent from the American Medical Association, the American Pharmaceutical Association offer the following

Resolved That the American Pharmaceutical Association condemns the prescribing and dispensing of proprietary medicines and while the necessity of protecting capital invested in the manufacture and marketing of galenical preparations is recognized, we protest against any system of protection which permits one manufacturer to retain the exclusive control of a pharmaceutic product indefinitely and regard the law which permits it as opposed to true progress in pharmacy and medicine

Resolved That the working formula of every pharmaceutic preparation should be published and a technically correct scientific name given it, so that it may appear in professional literature, find a place in the *Pharmacopœia or National Formulary, and be free to all pharmacists to manufacture and sell*

Resolved, That physicians be particularly requested to consult the United States Pharmacopœia and National Formulary in prescribing galenical preparations, and that we request both of these works be made text books in the medical colleges

J M Good,
William C Alpers

The Secretary read the following

Decision of Judicial Council

May 9, 1895

The papers referred to the Judicial Council concerning the Texas State Medical Association consist of a printed pamphlet severely reviewing the past action of the Texas Association, and a letter from the author, apparently, asking the Committee on Registration to suspend the registration of delegates from the Texas Association until a proper protest can be presented But as no such protest accompanies the papers received by this council, there is nothing in form ready for the action of the Judicial Council of the American Medical Association

John B Roberts, Secretary

By order of Council

Dr Gihon offered the following, which was adopted

Resolved, That the cost of the necessary printing and distribution of circulars for the Rush Monument Committee shall be defrayed by the Association on vouchers certified by the Chairman and Secretary of that Committee

Dr Herr, of Lancaster, Pa, offered the following, which was adopted

Whereas, Many of our ablest and most honorable members have been Acting Assistant Surgeons in the service of the United States during the War of the Rebellion, occupying responsible positions and subject to the same rules of discipline as commissioned officers and enlisted men it is the sense of this society that the Congress of the United States should, by enactment place them where they honorably served, upon the same plane of distinction as commissioned officers of the same grade therefore be it

Resolved That this body recommend Congress to enact such legislation as will place all those who served as Acting Assistant Surgeons during the years from 1861 to 1865 and who were honorably dismissed, the same distinction as commissioned officers in the same grade of service

The Association, on motion, adjourned to meet in Atlanta, Ga, the first Tuesday in May, 1896

SELECTIONS

Tuberculous Adenoid Vegetations of Naso-Pharynx.—M Lermoyez (*Ann des malad de l'oreille, etc*, 1894, No 10) alludes to some experiences with adenoid growths in the nasopharynx, which, on examination proved to be not lymphatic, but tuberculous in structure In such cases the removal of the growths gave only a temporary relief, a return soon followed In one case a rapid development of tubercle of the lungs followed the operation The writer proposes in all cases where there may be a suspicion as to the tuberculous nature of the adenoid growths to forestall the operation by a histological examination of a test portion and to complete the operation finally by galvano cautery in order to hinder the entrance of germs into the opened blood vessels The subject is quite important but the writer's material was so scanty that further investigations in this direction are earnestly desired

A Case of Tubercular Meningitis, with Recovery—(Freyhan in *Deutsche med Wochenschrift*) Existing opinions in general are against the possibility of recovery from tubercular meningitis since the brain is only in rare cases the sole point of infection, but a general miliary tuberculosis, as a rule, exists So much the more interesting is the observation at the city hospital at Friedrichshain in Berlin of an instance of recovery, in which the tuberculous nature of the process was most infallibly shown The diagnosis was proved by puncture of the spinal canal at the level of the second lumbar vertebra and by drawing 60 c c slightly turbid, light colored serum, in the sediment of which was found a scanty number of pus corpuscles and undoubted, deep red, tubercle bacilli, arranged like strings of pearls, whose presence was further assured by numerous control preparations After the puncture the patient recovered so quickly and uninterruptedly that after three weeks without fever he was able to leave his bed This case is also instructive with regard to the differential diagnosis between tubercular and cerebro-spinal meningitis The recovery of a case in which opinion has wavered between these two affections, usually tends to strengthen the diagnosis of cerebro-spinal meningitis The result of a puncture in connection with the microscropic and bacteriologic investigations is destined to clear the point Entirely aside from the therapeutic value of this method, it is certain we possess in it a diagnostic resource of the first rank in the differential diagnosis between tubercular and cerebro-spinal meningitis —*Centralblatt für innere Medicin*

Omphalectomy in Radical Operations for Umbilical Hernia —Dr L Pernice, surgeon to the Deaconess' Hospital at Frankfort, relates in detail an operation on a very corpulent woman for a long-standing, irreducible, umbilical hernia as large as a child's head The operation was undertaken on account of constipation, pain, and persistent vomiting The incision was about 25 cm long, and passed in a semicircle to the left of the umbilicus A short incision passed to the right of the umbilicus and so completed an oval which was excised with the sac and the margins of the rectus muscle The inflated intestines were replaced with great difficulty Then, following Bruns' recommendation of the plan of Condamin, he attempted the suturing in three layers, found this impossible from the tension, and even with the single layer was forced to resort to silver wire, and to use many sutures The patient did well, stool on the fifth day after calomel, no rise of temperature, except on the eleventh day (38 4 degrees C), when four days had elapsed without stool All sutures removed on the sixteenth day On the eighteenth day sudden dyspnea and cyanosis and she died within fifteen minutes from pulmonary embolism

"I would especially emphasize that I do not ascribe this death to the method of operating, but to an accident Although a post-mortem was refused, the diagnosis of embolism seems sufficiently assured The operation in itself is simple, excision of the umbilicus is easy, replacing of the intestines would not in most cases be hard, but the greatest difficulty in the operation lies in closing the wound The Condamin method of suturing can not be recommended On the strength of this one case, I feel compelled to regard the usefulness of this new operation as limited While in Bruns' case the hernial opening admitted the tips of two fingers, in mine five or six could easily enter, hence it was at least three times as broad After such an excision the edges of the wound were separated too far to be easily brought together And when, moreover, the hernial sac has long contained many coils of intestines, and the abdominal cavity has become diminished in size, it will be seen that the difficulty of closing the wound is much increased after the hernial contents have been replaced" —*Centralblatt für Chirurgie*

Snegirjoff Steam —A new Hemostatic Preliminary Report (Clinical Lectures of Professor Zacharyn and the work in the clinic of the Faculty of Therapeutics of the Imperial Univ of Moscow) This work of the distinguished Moscow gynecologist deserves special attention In 1893 he extirpated an echinococcus cyst of the liver which protruded from the left lobe with a base of four fingers breadth Since the base of the tumor was very thick and he yet wished to remove the entire sac, he tried to divide the pedicle with the actual cautery, but failed completely in stopping the hemorrhage, until at last he filled the wound with gauze as a tampon The woman recovered He was convinced, as other surgeons have been, of the inadequacy of our means of hemostasis from the liver Sutures cut through, matrass-sutures can not always be used, cautery is often insufficient, so that marpy scraps (Scotch gauze) become necessary In this way there occurred to him another long known hemostatic

Seven or eight years before, he had used steam as a cautery and hemostatic in gynecologic therapeutics After a dilatation of the cervix and curetting, for instance, he passed into the uterus a catheter, perforated at the end, like a sieve, within which was a thin metal tube, connected with a steam boiler supply The application of steam at about 100 degrees C , for a half to one minute was sufficient for cauterization and hemostasis and this was recognized by the discharge from the catheter of a dark-colored fluid, resembling strong bouillon in appearance This operation is painless and the patient does not recognize the moment of application of the steam What happens within the uterus? In the extirpated uterus, at an experimental trial, the mucous membrane immediately afterward appeared scalded, covered with a thin white pellicle In cases where there was putrefaction, at once all odor disappeared, where the mucous membrane was painful, the pain was removed, if one adds the antisepsis accomplished by the steam, then its full significance is seen, cauterization, hemostasis, anesthetization and antisepsis All this had long been known to him, but now he turned his special attention to the hemostatic action and conducted a series of experiments on animals with specially constructed instruments 1, without any loss of blood portions of liver were removed, the animals surviving, similarly, parts of the spleen, the lung, the kidney, the brain, 2, hemorrhage from the cancellous tissue of bone was stopped The marrow was scalded and reformation of true bone (?) resulted, 3, in a dog it was possible to remove a horn of the uterus without hemorrhage, 4, the femoral artery was severed diagonally or transversely without hemorrhage, 5, hemorrhage from wounds of muscles or skin ceased at once, 6, furthermore, primary union followed The final experience was not only with animals, but also in operations on man, and even in laparotomies

In 1893, he used steam in the Alexina Hospital in the following operations 1, in five cases of resection of the knee-joint, without hemostatic forceps, without a single ligature, 2, in an amputation of the breast for cancer, also without a ligature, 3, in removal of cancerous, lipomatous or cavernous neoplasms of the skin, 4, in amputation of the cervix uteri, 5, in stopping hemorrhage from the pedicle after removal of fibroids, 6, in abscesses for disinfection and stimulation to cicatrization, 7, for hemorrhages from sinuses and fistula (especially in tuberculosis)

On the strength of this, Snegirjoff pronounces steam a powerful hemostatic and antiseptic Sound as well as diseased tissues, and the organism *in toto* bore the action of steam vaporization well Primary union was not prevented, the wounds of parenchymatous organs appeared smooth, even shining, at the site of removal of tumor By way of illustration, Snegirjoff dictated a description of the examination of a dog subsequent to operation in the region of the left kidney a piece of the left horn of the uterus, 2 cm long, in which, as in a cyst, was a collection of fluid, was attached to the broad ligament Over the steamed surface was a smooth cicatrix, pigmented in the center The lumen of the left horn of the uterus, at the point of excision was firmly closed, in consequence of which the cyst-like collection of fluid resulted The margin of the broad ligament, along the incision was smooth, even without noticeable cicatricial contraction The peritoneum was smooth, moist, shining No pathologic changes in the para-uterine or other pelvic cellular tissue There were large blood vessels in the broad ligament of the remaining portion of the left horn of the uterus

In view of this, the surgeon can without fear remove portions of parenchymatous organs The far-reaching significance of the results thus made public is evident If the statements are fully confirmed, the work of the active and vigorous Moscow college will bring about a revolution in the whole technique of operations Steaming would have the greatest value in hemorrhage in laparotomy for extra-uterine pregnancy, in atony of the uterus, after injuries of the soft parts in delivery, after symphysiotomy, in rupture of the uterus, all the operations for cancer, etc —*Centralblatt für Gynakologie*

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This is obtainable at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association All that is necessary is for the applicant to write to the Treasurer of the Association Dr Henry P Newman, Venetian Building, Chicago, Ill sending him a certificate or statement that the applicant is in good standing in his own Society, signed by the President and Secretary of said Society Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership

On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly

Gentlemen already members of the Association should send their annual subscription to the Treasurer or direct to the JOURNAL office

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof sheets returned, or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 86 Fifth Avenue Chicago

SATURDAY MAY 18 1895

THE BALTIMORE MEETING

The forty-sixth annual meeting was characterized throughout by great harmony The Section work has seldom been better managed, and the attendance was larger than the average The ASSOCIATION, by an overwhelming vote, indefinitely postponed all proposed amendments to the Constitution and there will therefore be none of consequence to be voted upon at the Atlanta meeting

The vote by which the Secretary and the Treasurer are required to be in attendance one day before the opening session, for the purpose of better organization of the registration, will save much annoyance to the members, and relieve the local committee of much of its burden

The action of the Board of Trustees in regard to the advertising was the subject of much favorable remark This action, which appears in detail in the report, was agreed upon at the Chicago meeting of the Board, but as two members were unable to be present at the Chicago meeting, the Board were not ready to report earlier than on Thursday An attempt was made on Monday to compel them to report at once, and to have a special committee appointed to inquire into its nature, but the ASSOCIATION declined by a majority vote to appoint a committee, the effect of which would have been to create distrust When the report was made, it was so clearly in the line desired by the mover of the resolution, DR S SOLIS-COHEN, of Philadelphia, that that gentleman himself, amidst thundering plaudits of the meeting, moved its adoption in an eloquent speech This action of DR COHEN at once proved the sincerity of his course, and the practical unanimity of all parties composing the ASSOCIATION Now that the advertising question has been eliminated from further consideration, we sincerely trust that all may work the harder to sustain, support and improve the JOURNAL It is due the Trustees to state publicly that the change finally adopted has been gradually going on, for the last year, and as fast as contracts have expired the formula has been required from advertisers of proprietary medicines It will take some time to bring the remainder into line The members will please to understand that those carried beyond this issue are only awaiting the expiration of the existing contract

PRESIDENT MACLEAN still further added to his well-won laurels by the dignity and wisdom with which he performed his difficult duties In the election of DR R BEVERLY COLE, of San Francisco, a tribute was paid to long and faithful service in the ASSOCIATION, recognition of a medical teacher of National reputation, a sanitarian of eminence, and a compliment to the profession of the Pacific coast

The minutes of the general sessions, which we present in full in this issue, will, we feel sure, be of unusual interest, not only to those members who were present at the meeting, but as well to the larger body of our colleagues who were compelled to remain at home

The social features of the meeting were quite sufficient to occupy all the time at the disposal of the members and the ladies by whom many were accompanied Baltimore looked its best The boulevards are fresher at this season than at any other, the grass and the leaves a more vivid green, the flowering shrubs, the wisteria clusters with their delicate heliotrope coloring, everywhere met the eye, and the fragrance of lilacs pervaded the air Nowhere in America, except in Washington, does one see cleaner streets than in Baltimore, and if certain sanitarians do occasionally take a fling at the policy which prevents the construction of sewers, it must be admitted that the month of May in Baltimore is a very charming month indeed

The teachers at the Johns Hopkins Hospital had every opportunity to show to good advantage the high class work they are doing, and that they made full use of the opportunity thus offered was as pleasing to the ASSOCIATION as it was creditable to themselves

In conclusion, it may be said that those elements which go to make up the *tout ensemble* of a successful meeting of our great ASSOCIATION, viz , harmony, science and social pleasure, the forty-sixth annual meeting possessed in an eminent degree

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Blank Applications for membership in the ASSOCIATION at the JOURNAL office

THE WORK OF THE PRINCIPAL SECTIONS

This number of the JOURNAL is preeminently *the* ASSOCIATION number, for we have a verbatim report of the discussions and debates in the general sessions, and as well the resolutions passed therein The bare report of the final action of the body, without a statement of the debate which gave direction, is sometimes unintelligible to those who were not present

The work of the Sections was in general characterized by thoroughness and enthusiasm We append a brief review

PRACTICE OF MEDICINE

An unusually large number of papers were read in the Section on Practice of Medicine The topics were well selected and the authors gave more than usual care tó their preparation We have a pleasure in store for our readers who were not present at the meeting, in the perusal of the papers of this Section

SURGERY AND ANATOMY

The work of the Surgical Section comprised the presentation of forty papers Of these papers all but ten were read The latter were read by title, and will be published in the proceedings of the Section Whereas the range of subjects covered the entire field of practical surgery, a number of special subjects were extensively considered Among those of special interest were, "The Surgery of the Kidney and Ureters," and "Modern Methods of Cystoscopic Examinations of the deep Urethra and Bladder" Abdominal surgery was further considered in papers and discussions upon, "Appendicitis," "Intestinal Obstruction," and "Surgery of the Gall-Bladder" To accomplish the reading of all the papers, the Chairman of the Section felt it incumbent without favoritism to enforce the twenty minute rule as to the reading of papers, and the five minute rule for the discussions The good judgment of the Section at large was amply illustrated in discussing particularly those questions which were of paramount interest, and passing, without comment, papers of less general interest and importance Altogether, the work of the Section was fully equal to the best efforts in the same direction of previous years If any exception could be taken to this work, with the view of improving Section work for the future, it would be in the number of the papers read As the Section work is now constituted, the Chairman of the Section is not empowered to refuse volunteer papers The time must come when all papers will be presented to a proper committee and deemed worthy of a place upon the program before they can be submitted to the Section by their authors J R

OBSTETRICS AND DISEASES OF WOMEN

The work of the Gynecologic Section was satisfactory to a high degree As will be seen from the reports, the papers presented were of an unusually high order, both as to subject matter and manner of treatment The discussions were spirited and were led by men qualified to speak with weight upon the points at issue

The attendance at each session was large and interested, the only drawback to the enjoyment of the meetings being the difficulty of hearing speakers in so large an auditorium, the accoustic properties of which were bad Withal, the Chairman of the Section, DR FRANKLIN H MARTIN, is to be congratulated upon the unqualified success of the department over which he presided The Chairman-elect of this Section is DR JOSEPH TABOR JOHNSON, of Washington, D C H P N

OPHTHALMOLOGY

The sessions of the Section on Ophthalmology brought together probably the largest number of working ophthalmologists that have ever assembled in America The restriction of papers to ten minutes, and of remarks in discussion to five minutes for each speaker, was noted to be more effectual in keeping out matter lacking general interest, and in holding the speakers to the point under discussion, than any other means that have been tried

In arranging the work of this Section all the papers on the same or related topics had been carefully grouped together, and time had been provided for their discussion, and speakers invited to open the discussions The result was not only that large numbers came to the meeting to attend this Section, but that they closely followed its sittings up to the last day of the meeting

The series of papers on operations on the ocular muscles, and other methods of treating muscular anomalies, on plastic operations about the eye, and on astigmatism, with the discussions they elicited, will long be remembered by those present What was felt to be the most serious defect in the program was the arrangement of receptions on the evening of the Section dinner This annual dinner has become a highly appreciated occasion of reunion, and the feeling in this Section is very strong that in arranging for future meetings one evening, preferably the second, should be devoted entirely to Section dinners E J

NEUROLOGY AND MEDICAL JURISPRUDENCE

The Section on Neurology and Medical Jurisprudence at the Baltimore meeting, had the largest attendance and the greatest number of scientific papers of any previous meeting of the Section The average attendance exceeded that of any other Section of the ASSOCIATION

The scientific work was arranged principally in three symposia, to-wit hypnotism, electricity and epilepsy, and about a dozen papers were read on miscellaneous topics on neurology The discussions were unusually good, and participated in by some of the ablest neurologists in America D R B

STATE MEDICINE

The Section on State Medicine had an unusually large attendance There were thirty-eight papers on the program, twenty two of which were read The symposium on alcohol by members of the American Medical Temperance Association was one of the distinguishing features, and the character of the papers was of high scientific value The appointment of a special commission to investigate the alcohol question will doubtless be hastened by these preliminary discussions in the Section The Section, as will be seen elsewhere, loyally adhered to the ASSOCIATION movement for the establishment of a Department of Public Health

DISEASES OF CHILDREN

This Section, which has languished for the last two years, sprung into new life under the active efforts of its Chairman, and the meeting this year was the largest ever held In scientific value the papers were fully equal to those of the Detroit meeting, which up to this time has been supposed to be its best meeting

LARYNGOLOGY AND OTOLOGY

The work of this Section exhibits the same general advance in interest that was manifest last year The attendance was more than three times that at San Francisco, and several of the leaders who of late have been conspicuous by their absence from the ASSOCIATION meetings, were present and warmly welcomed

CONCENTRATED FOOD AND ARMY RATIONS

A ration, in the phraseology of Army Regulations, is the "established daily allowance of food for one man" The regular ration of the United States Army is accepted by all as liberal and satisfactory, but as it may not always be possible to issue it during active service, the question of an emergency ration has been under discussion, for some time back, in Army circles Recently a practical turn has been given to the subject which promises to yield results that will be of value, not only to the soldier, but to the country at large GENERAL MORGAN, Commissary General of Subsistence, has invited the attention of the Secretary of War to the want in our service of a special ration to be carried by each soldier and used only when the regular issue can not be made Such a ration should combine the properties of wholesomeness, palatability, proper nutritive value and portability, and should in addition possess good keeping qualities MAJOR WOODRUFF, of the Commissary General's office, has elaborated a ration of biscuit and soup tablets, the latter containing the fiber of the meat, which is regarded as furnishing the needful nutritive principles in a minimum of bulk and weight, but before recommending the adoption of this, GENERAL MORGAN desired to have the coöperation of line and medical officers in considering the question and determining the selection He therefore suggested that in each of the military departments a board, of one subsistence, one medical and three line officers, be convened to consider and recommend a proper ration for troops operating in emergencies, and that each of these boards give special consideration to the following points "1, the component parts of the ration selected with regard to wholesomeness, nutritive value and portability, 2, acceptability to taste, 3, keeping qualities, 4, weight, and the kind, size and form of package for convenience of use and of carriage on the person, 5, directions for use, 6, number of rations to be carried by the soldier, and 7, whether these are to be carried at all times as a part of the equipment or to be issued only as required by the probable emergency If after the reports have been received by the commanding general it should be found that there are material differences of opinion it is suggested that a board of officers be convened at Washington to reconcile these differences if practicable I also recommend that a sum not exceeding $100 [and this is the practical part of the recommendation] from subsistence funds be assigned to each board to meet the expenses of materials and preparations thereof in the experiments necessary to be made by it" The Secretary of War has approved the General's recommendation and these boards will speedily be organized

The emergency ration of foreign armies consists generally of biscuit and meats, pemmican, sausage, stews, soups, etc, put up in hermetically sealed tins and prepared usually at private factories Of these the pemmican is regarded as the highest concentration, four ounces being considered equivalent to one pound of meat The meat biscuits, 25 per cent meat and 75 per cent flour, formerly used in the British service were found to keep very well, but as the baking at about 500 degrees Fah was believed to injure the nutritive value of the meat, their use was discontinued For some years preserved meats from Australia, Argentina and the United States were used by the British government Chicago canned beef was regarded by the medical officers of the Netley Medical School as having more than twice the nutritive value of an equal weight of good roast beef This canned beef with its high nutritive value costs in the United States less per pound than fresh meat, with its large percentage of refuse and its liability to become tainted Students of domestic economy should make note of this important fact Germany established canneries as long ago as 1870, and is now able to turn out daily nearly half a million of meat rations Up to this time France has depended on the United States and Australia for a canned meat ration, but a recent Army Commission has reported against any further contracts for these meats, on the ground that the foreign manufacturers before canning the meat, extract from it a concentrated bouillon from which they make Liebig's extract and solidified soups They are thus able to underbid French manufacturers who put into their cans every particle of the nutritive elements of the meat The Commission therefore urges an appropriation for the establishment of governmental canneries

Beef extracts are not used as emergency rations by any of the governments The meat fiber is present in all, but in most of the samples, particularly in the patent or cooked rations of various makers, on trial by military authorities, there is an unnecessary amount of water In some this non-essential water constitutes more than half of the bulk In the form of biscuit, farinaceous foods appear to approach as near as possible to the condition of water free food It is therefore mainly to the elaboration of the meat ration that the attention of the boards to be convened at the request of General Morgan, will no doubt be directed

PERILS OF THE LABORATORY

It has been so, since the world began, that the pathologist takes his life in his hand There are, we believe, far fewer dissecting-room wounds now than before the Listerian era, but the grounds of peril have not been removed, they have been shifted to the laboratory When one considers the vast army of laboratory workers, however, and the minute and almost unintermittent toil given by many of such workers, is it not strange that more frequent misadventures by infection have not been reported? The rules of all well-constituted laboratories are rigid, and recognized to be in the line of the self-preservation of the workers These are all very well and yet they doubtless do not, and can not, cover all the points of peril coming from atmospheric infection, take, for example, the ærial carriage of the tuberculous bacillus, in the form of floating floor-dust, after the breakage or upsetting of a tuberculosis culture

The death of Dr John M Byron, of New York Quarantine Station, has recently been reported, and is believed to be an instance of the fatal results of laboratory infection by tuberculosis His death at the early age of 35 years means the untimely removal from the ranks of the profession of an exemplary scientist, a man who has already achieved a more than local reputation

Dr John Manuel Byron was a Peruvian by birth and a graduate from the University of Lima After taking his degree he went to Europe and spent several years in study, making a specialty of the diseases originating in bacteria He visited Paris and Berlin, attended medical lectures, and pursued original investigations in the hospitals He then went to Naples, and settled down there to practice He was proficient in five languages—inclusive of his native tongue, the Spanish About seven years ago, he took up his residence in New York He never practiced very much, preferring the life of the laboratory He was appointed chief of the bacteriologic department of the Loomis Laboratory, and lecturer in that branch in the University Medical College In addition to this work he was connected with the New York Dispensary He did not court outside practice, but used all his leisure in the study of his specialty in the Loomis Laboratory, where he gave special attention to the bacterial study of malarial fevers and leprosy During the cholera scares of 1892 and 1893, he was made the pathologist to the Swinburne Island Hospital, and was isolated there until the cases were all closed by recovery or death Health Officer of the Port, Dr Doty, had only recently appointed him to a similar but larger line of work, as the bacteriologist of the quarantine establishment of New York Harbor Concerning his own experience in regard to the onset of tuberculosis, he is reported to have expressed himself as follows

"I have been making cultures of disease germs for twelve years, and I suppose familiarity with them made me careless, just as a surgeon frequently cuts himself with his knife You know it was our custom to get the sputum of patients in the hospitals suffering from consumption, and to find this bacteria These are generally confined in bottles or tubes when not in use, but when we want to put them under the microscope they are spread out on glass

"One is practically safe as long as they are wet, but when they become dry they fill the air as so much dust, and you can not help but inhale them It is in this way, you know, that consumption spreads

"I was somewhat run down last February—in fact, I had never become very strong after my exposure during the cholera scare I was doing some experimenting with tuberculosis bacteria at the time, and I suppose that some of them had been allowed to dry —how, I don't know—but it may be that some were brushed to the floor during our researches, or that the bottles were not thoroughly sterilized, or in any of the thousand and one ways in which carelessness may exhibit itself"

ON THE RIGHT TRACK

The Journal hastens to seize the present promise —before it fades away fruitless—that the opponents of oleomargarine are about to fight that product on legitimate grounds Bills are pending in sundry State Legislatures to forbid the addition of coloring matter to oleomargarine or any of its variants whereby it may be butter in appearance—"the same with intent to deceive"

This is laudable and proper Every honest citizen who hates sham and fraud will join the Journal in applauding such a measure Let us have our oleomargarine in its pristine purity, like the pearl from which its name is borrowed Let us have no sailin under false colors Nor will we stop to inquire too closely into the motives which inspire this sudden access of virtue We will take the statement at its face value—that these bills are intended to protect the innocent consumer who "puts the bogus butter on his bread in a restaurant and eats it in the belief that it is genuine golden butter of the kine" There are thousands of persons who would not eat oleomargarine if they knew it, they say, and if it were left as white as it is before the coloring matter is introduced, these particular persons would be enabled to detect the imitation when it was offered them

But while thus congratulating the guileless dairyman on this new departure, the JOURNAL begs to offer an amendment to all and sundry of these bills, to-wit that the addition, not alone of coloring matter in the form of carrots, annatto, turmeric, etc, be forbidden the cow butter-makers, but also the use of "oleo" and various other "dopes" in dairy products generally, sold under the guise of "creamery butter," "pure country butter," etc If these gentry will persist in hampering the sale and use of a wholesome and palatable cheap butter substitute, let them put their own wares under the same restrictions The average oleomargarine of commerce is every way preferable to the average dairy butter at equal prices, as every hospital administration well knows By all means compel the sale of the substitute under its true name, uncolored and without other sophistication, but let the dairymen come into court with clean hands while demanding this, and subject the original to the same requirements

A FOUR YEARS' COURSE REQUIRED

The American Medical College Association, in a well attended meeting, by an overwhelming vote sustained the action taken at San Francisco, and permanently fixed the minimum requirements for graduation at four years of instruction in the medical college, the course each year not to be less than six months Immediately after this action the colleges in Louisville not already belonging to the Association signed the constitution and became members This insures the cooperation of the larger medical colleges of the Southern States, and will doubtless be followed before long by the other Southern colleges

A proposition was received from some of the representatives of the Southern Medical College Association to the effect that if they would be allowed two years in which to come up to the four years' course, they would apply at once for membership The difficulties under which these schools would labor in an attempt to adopt the four years' course at once were fully set forth, and the Association appreciated the progressive and friendly spirit in which the proposition was made, but it did not seem practicable to provide for two grades of colleges in the Association, however, a resolution was unanimously passed that hereafter the representatives of the Southern colleges be invited to the annual meetings of the Association as guests No changes were made in the present rules of the College Association

The officers elected for the ensuing year were President, DR WILLIAM OSLER, of Baltimore, Vice-Presidents, DRS J M BODINE, of Louisville, and D W GRAHAM, of Chicago, Secretary and Treasurer, DR BAYARD HOLMES, of Chicago, Judicial Council, DRS D S REYNOLDS, of Louisville, W H PANCOAST, of Philadelphia, and VICTOR C VAUGHN, of Ann Arbor, Mich

ASSOCIATION OF AMERICAN MEDICAL EDITORS

The American Medical Editors held their annual dinner, after some tribulation owing to some delays by train, and misunderstanding of the exact place and time of the banquet The local committee-man, DR CANFIELD, was in no way to blame and did his best to make matters agreeable to all concerned

At the business meeting on Wednesday appropriate reference was made to the loss the Association had sustained by the death of their late colleagues DR F L SIM, of the *Memphis Medical Monthly* and DR E S ELDER, of the *Indiana Medical Journal*

Steps were taken in the direction of better organization, and DR GEORGE M GOULD, of the Philadelphia *Medical News*, was elected President, DR OHMANN-DUMESNIL, of the St Louis *Atlas of Dermatology*, Vice-President, and DR H BERT ELLIS, of the *Southern California Practitioner*, Secretary

Next year it is proposed to make more prominent the literary feature of the meeting, and, to obviate the bad effects of delayed trains, the dinner will be held on Tuesday *evening instead of* Monday as heretofore

PUBLIC HEALTH

Immunity against Diphtheria —Ehrlich and Behring have determined that one fourth of a curative dose of antitoxic serum is sufficient to secure immunity Among ten thousand persons thus treated, only ten suffered from the disease although it was prevailing extensively If the injection is made toward the end of the incubation period it may not prevent the disease, but the attack will be greatly modified The larger the dose the longer the protection The antitoxin is gradually excreted by the kidneys When it has been entirely removed from the system the immunity ceases The injection of several small doses at intervals is more effective in establishing immunity than a single large dose

Diphtheria Antitoxin by Electricity —Dr Nencki, of St Petersburg has succeeded in producing diphtheria antitoxin by means of electricity His method is the following producing by cultivation, in the ordinary way, a very virulent diphtheritic broth, he passes through this solution a continuous current of electricity from 100 to 200 milliampères for eighteen hours The broth thus treated was found to be capable of curing a rabbit of diphtheria which had been inoculated with the disease eighteen hours before [1]

Sulphur Fumigation in Malarial Fever —M d'Abbadie, the celebrated French explorer of Abyssinia, recently reminded the French Academy of Sciences that in 1882 he had made known the belief entertained by the natives of that country that daily fumigation of the naked body by sulphur, prevents intoxication by the pernicious and intermittent fevers of the deadly lowlands of the torrid zone M d'Abbadie recommended this to M Colin on his geodetic expedition to Madagascar, but he only carried it out once on embarking at Tamatave, and he has now returned to France suffering from fever and fatigued by a long course of quinin In concluding, M d'Abbadie expressed the hope that this method will not be lost sight of in the French military expeditions to Madagascar [2]

A Study of Dengue —Marich reports his personal observations on the epidemic which visited Smyrna during the summer of 1889 This epidemic made its appearance toward the middle of June in the Jewish quarter, which on account of poverty, overcrowding and unhygienic surroundings furnished most of the victims The dengue then successively invaded other parts of the city, neither sex, age or race were exempt, and four-fifths of the populace were attacked The author describes these phases or periods first, febrile access with intermediate apyrexia, second, febrile access, accompanied or followed by a true eruption, critical manifestations, desquamation and convalescence Treatment is by ice, dieting, diaphoretic and diuretic drinks, antipyrin and quinin, during convalescence, arsenic and iron Hydrotherapy is always efficacious Usually in order to thoroughly recover, the patients must resort to the pure air of the country [3]

Yellow-Fever Scare —A Washington dispatch announces that in accordance with the recommendation of Surgeon-General Wyman, U S Marine-Hospital Service, the Acting Secretary of the Treasury Department has telegraphed to the Collector of Customs at Shieldsboro, Miss, to require all vessels from infected districts to repair at once to the Ship Island, Miss, quarantine station for disinfection This action supersedes the State quarantine laws, the danger of the introduction of yellow fever from Havana being considered such that prompt and vigorous measures are deemed necessary, and it being feared that State authorities have not the facilities at hand to act promptly Vessels will not be allowed to leave the Ship Island quarantine station without having a pratique signed by the United States quarantine officers It is also announced that Surgeon General Wyman will remain in the South until all the necessary measures for inspection of vessels from infected districts are put into operation Fortunately, the "cold wave" will give ample time for these preparations before the "danger line" of 70 degrees mean temperature is reached

Dr Dana on the Bicycle —The venerable dean of the American newspaper press, Charles Anderson Dana, LL D, thus discourseth—*experto crede*—on the pleasure and the hygiene of the bicycle "Not less pleasing than the sight of the young women and young men on their bicycles is the sight of the old chaps Lots of graybeards can be seen along the up-town avenues wheeling at a speed that must be admired Two or three of them challenged a squad of their juniors to a race yesterday, and beat them badly, beat even the energetic damsels who joined in the race They sat erect, got a good grip, and worked their thews from the finger tips to

he stains are touched with a piece of cloth dipped in this mixture, and then rubbed The spots, even if of long standing, disappear almost instantly, on woolens, cotton or linen Stains on the skin may be removed by the same method They first assume a yellowish-white color and then completely disappear [1]

The Offenders —Professor Cesare Lombroso, of the Chair of Legal Medicine, University of Turin, has produced a new book, "The Female Offender" This is shortly to be followed by another, entitled "The Juvenile Offender" These books appear in English translation as parts of the Appleton's Criminology Series

A Marriage Centenary —Vienna journals chronicle the centenary of the marriage of Johann Szathmary and his wife—the former at the age of 117, the latter one year younger The municipality of Zsombolga, their native village in Hungary, has voted the aged couple a pension in honor of the event, so that there would seem to be no doubt that even in these days of degeneracy one Darby and Joan have survived one hundred years of married life

The Height of Kindness —The locality whence the following strange paragraph is supposed to have issued is Syria, in Western Asia The saying indicates, among other things, how unprepared the down-trodden woman was for any kindness on the part of any male, not excluding the male physician "An old Bedouin woman who had been restored to health in a Christian hospital, returning to her tribe, said to her husband 'The doctor was as kind to me as if I had been a man'"

A Bizarre Method of Prophylaxis of Venereal Diseases —With a view to diminishing the danger of venereal infection from public women, Letzel proposes to shave the mons veneris of prostitutes found suffering from syphilis or gonorrhea at the weekly inspection He claims this should be repeated at each weekly inspection and should be continued for two or three years, by which time they will necessarily be driven into other walks of life as their clientele will be fully warned This procedure will cost about $1 30 yearly for each woman A French contemporary remarks that this measure would only increase clandestine prostitution, which is much more dangerous [2]

Child Life Insurance—The Massachusetts Legislature is just now the battle-ground in regard to this subject, and the philanthropic, or "reform party" has carried on the fight with varying success The last reported stage was defeat, as is shown by the following item taken from *The Independent* for May 9 "The bill to abolish child life insurance in Massachusetts, which recently passed the State Senate, was defeated in the lower branch of the Legislature on April 30, receiving only 23 votes in its favor against 148 cast by the opposition The interest in this bill has been very great, and the societies and individuals who have been at the bottom of the attempt at legislation on the subject are considerably chagrined at their defeat"

Tree-trunk Filtration —An Austrian engineer, M Pfister, having discovered that the trunks of trees retain the salt of sea water that has filtered through in the direction of the fibers, has constructed an apparatus designed to utilize this property in obtaining potable water for the use of ships' crews This apparatus consists of a pump which forces the sea water into a filter formed by the tree trunk As soon as the pressure reaches 1 5 to 2 5 atmospheres the water—at the end of from one to three minutes, according to the kind of wood used—makes its exit from the other extremity of the trunk, at first in drops and then in fine streams The water thus filtered is potable and quite free from the usual saline taste. It is not stated, however, what amount of use will saturate the fibers to such an extent as to destroy their filtering property.

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[1] Modern Medicine
[2] Gaz Med del'Algerie
[3] These de Paris

[1] Les Nouveaux Remedes
[2] Le Bulletin Medical

Dr. David Avison, of Korea.—The Korean Government has requested Dr. Avison, of the Presbyterian Mission in Seoul, to resume charge of the Government Hospital in that city on most favorable terms, and he has consented to do so. Dr. Avison was formerly in charge of this hospital, and was cordially supported by the King; but the obstructions put in his way by subordinate Korean officials compelled him to resign his position. The tide of Japanese victories has, however, secured for Dr. Avison a new and stronger backing from the government in power.

The death of Dr. Hall, a medical missionary to Pyeng Yang has left a vacancy in the Korean supply of educated practitioners; the field is estimated to have a population of 2,000,000.

Charitable Bequests for New York Institutions.—Mrs. Clarissa L. Crane, of New York City, dying left an estate of $400,000, of which about $60,000 is willed to public institutions or benevolent societies. Of these the following charities, remembered by the late Mrs. Crane to the extent of the sums set down against them, have an interest to the medical profession: the Chapin Home for the Aged and Infirm, $10,000—besides which there are residuary donations possible—New York Society for the Prevention of Cruelty to Children, $1,000; New York Society for the Relief of the Ruptured and Crippled, $1,000; New York Skin and Cancer Hospital, $1,000; Home for Incurables in Fordham, $1,000; New York Institution for the Blind, $1,000; Prison Association of New York, $1,000; Women's Prison Association and Home, $1,000, and Children's Aid Society, $1,000.

The Metric System in Army Medical Practice.—On and after January 1, of the present year, it was expected that all prescriptions written by Army medical officers in the course of their official duties would have quantity expressed metrically. Notice of this requirement was given in a circular from the Surgeon-General's office in April of last year, so that every one concerned might familiarize himself with the equivalents of ounces and fluid ounces, drachms, scruples and grains in grams, cubic centimeters and their decimal fractions. It appears, however, that some medical officers found it difficult to get out of the old rut and continued the use of the hieroglyphics and Roman numerals. This was discovered by Surgeon General Sternberg in his recent inspection of the medical departments of certain military posts. A new circular has therefore been issued, calling attention to this, and stating in positive terms that failure to make use of the metric system will be regarded as a willful disobedience of orders. Inspecting officers are requested to report officially, through regular military channels, any failure to comply with the instructions promulgated relating to the use of the metric system.

To Render Sponges Aseptic.—After many experiments in his laboratory M. Meillere, Director of the Paris Academy of Medicine, gives the following method of rendering sponges aseptic: the shells and stones are first picked out by hand, then the sponges are beater to remove sand, etc. They are then placed in a 1 to 100 solution of hydrochloric acid for four hours and next washed and immersed in a cold solution of permanganate of potash. Next follows a bath in a solution of sulphurous acid, after which they are washed until all traces of the last acid have disappeared. To preserve until needed, keep them in 5 per cent. carbolic acid, 1 to 100 bichlorid or 1 to 300 of thymol solution. To cleanse sponges which have been used once, they are washed in green soap, rinsed in warm water and carried through the treatment mentioned above. It is advisable to submit them to a bacteriologic examination before using again.[1]

Suggestions for Expert Witnesses.—The premises, if disputed, from which an expert witness is to deduce his opinion, the General Term of the New York Court of Common Pleas holds, in the case of Frankfort v. Manhattan R'y Co., decided April 1, 1895, manifestly can not be presented as the actual facts of the case, and, in consequence, the expert must assume them as only hypothetically, not absolutely true. An expert witness can not base his opinion upon facts not communicated to the jury, nor upon hearsay, nor upon the evidence of others on the trial. The testimony of experts is not evidence which courts are disposed to accredit beyond the strict sanction of the law.

A Pessimistic View of It.—Referring to the probability that the Russian organizers of the Moscow Congress will adopt French as the official language, the *British Medical Journal* quotes a passage from an article by M. Kartschagumine in the *Vratch* on the unification of languages at international medical congresses, to the effect that medical men of all countries should aspire with all their might to the most intimate union, to the most perfect agreement on all scientific and social questions, that they may be able to prevent and combat evil in the widest sense of the word. Whereupon the *Journal* comments as follows: "The program is wide enough in all conscience, and noble enough to satisfy the most enthusiastic. The picture of the medical profession throughout the world united in a holy brotherhood and fighting against evil generally is beautiful and inspiring, but whether the unification of language would bring about a perfect agreement on all scientific questions, not to speak of social problems, may be doubted. It is possible, indeed, that differences at present hidden by difference of language may be brought into unedifying prominence by the use of a common tongue."

Gonococci in the Vaginal Secretions.—Buttner in the space of three months examined fifty four prostitutes of Dorpat, to ascertain whether or not they were affected with blennorrhagia. Of these thirty two were subjected to a semi-weekly examination through the speculum; the other twenty-two were encountered in the hospital. Of these latter, in only six did microscopic examination show the presence of a blennorrhagia. In eleven of the remaining sixteen, or 68 per cent., bacteriologic examination showed the presence of the gonococcus in the vaginal secretion and the same result in nine, 28 per cent., of the prostitutes registered by the police. Among the prostitutes under treatment in the hospital, Buttner made a separate examination of the vaginal secretion, the cervical mucus, and the secretion from the urethra. In the eleven women with manifest blennorrhagia he never found the gonococcus in the vaginal secretion. This microbe was found six times in the cervical mucus and the urethral secretion at the same time; four times in the secretion from the urethra only; once in the cervical mucus only. The author concludes that the examination of prostitutes as it is practiced at present does not give sufficient basis for the establishment of a certain diagnosis.[1]

Liability of Railway Company Tendering Physician's Services.—There is no general legal obligation, according to the Supreme Court of Indiana, resting upon a railway company to provide surgical aid for its injured servants. But such company having assumed the duty to provide a physician, and tender to its injured or sick employes his services, which they are free to reject or accept—a duty which is voluntarily assumed, and one which is not due from the company to its employes—the court holds, in the case of Pittsburg, C. C. & St. L. R'y Co. v. Sullivan, decided April 9, 1895, its liability can not be extended beyond its negligence, if any, in the selection of the physician or surgeon. In other words, it will be liable only, if at all, for its negligence in the employment, in the first instance, of an incompetent person, and not for his negligence or tortious acts in the treatment of its servants who accept his professional services When this duty is voluntarily assumed by a corporation of this character, it is only bound to exercise reasonable care and diligence, and is not required to select a physician of the highest skill and longest experience in the practice of medicine If it exercises this required care and diligence, its duty is terminated, and it is not liable for the subsequent malpractice or wrongs of the physician, committed in or about the treatment of its servants

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[1] L'Union Medicale.

[1] Jour. de Med. de Paris.

Hospital Notes

THE GERMAN HOSPITAL OF PHILADELPHIA —This institution is about to receive a donation of $1,000, under the will of the late Frederick Mayer, of that city A like sum is also to be bestowed upon the Lutheran Home and Asylum

College Notes

THE board of directors of the College of Physicians and Surgeons of Kansas City, Kan , met May 8, and elected officers for the ensuing year ——The forty-third annual commencement of the Woman's Medical College of Pennsylvania was held in Philadelphia May 8 There were forty nine graduates ——The Illinois College of Pharmacy, Chicago, has added to its faculty Mr Henry Kraemer and Mr J B, Nagelvoort ——The annual commencement of the Medico Chirurgical College of Philadelphia was held May 10 There were fifty-five graduates

Society Notes

THE Polk County Medical Society, Iowa, held its annual meeting May 7 The following officers were elected for the ensuing year President, D W Finlayson , first Vice-President, Clifton Scott, second Vice-President, C D Rawson , Secretary, W G Stoner ——The Southwest Kansas Medical Society held a regular meeting in Wichita, May 7 Dr Hurst, of Peabody, was elected President ——The Fox River Medical Association held a regular meeting at Elgin, Ill , May 7 ——The Luzerne Medical Society held a regular meeting at Wilkes-Barre, Pa , May 2 ——The Jackson County (Mo) Medical Society held a regular meeting in Kansas City May 9 ——The McLean County (Ill) Medical Association held their monthly meeting at Bloomington, May 6, Dr Galloway in the chair Papers were read by Drs Parkhurst and Mammen A committee was appointed to urge the State Medical Society to take some action in the matter of itinerant doctors ——The Trumbull County, Ohio, Medical Society will hold its annual meeting and banquet May 29 ——The Muskingum County, Ohio, Medical Society held its semi-monthly meeting in Zanesville, May 10 Dr G Warburton read a paper on Bright's disease ——The nineteenth annual meeting of the Southeast Missouri Medical Association was held in Charleston, Mo , May 7, 8 and 9 The following officers were elected for the ensuing year President, W P Howle , Vice-President, J P Sebastian , Corresponding Secretary, A D Bloomeyer

Louisville Notes

BURNETT —Dr Theodore L Burnett, formerly of this city, died at his late home Los Angeles, Cal , April 28, as the result of an accident while on a pleasure trip His death was due to a fall from a mountain trail in the cañon of the San Gabriel River On his return down the mountain he slipped and fell and was killed instantly Dr Burnett was born March 20, 1862, in Arkansas where his parents were in exile during the Civil War He was educated in Louisville, at the Rugby School, for many years a noted preparatory school for boys and young men He attended lectures at the University of Louisville and Hospital College of Medicine during 1887-88, but graduated at the University of New York, Medical Department, March 12, 1889 He returned to Louisville and was in the office with Dr Preston B Scott for several years, removing to Los Angeles in April, 1891 He was a frequent contributor to medical literature At the time of his death, he was Surgeon of the Los Angeles Terminal R'y, and had gained a high standing in his profession He was married in September, 1893 His remains were brought here for interment

AMERICAN MEDICAL ASSOCIATION —The following physicians are gradually returning from the most delightful meeting of the ASSOCIATION in Baltimore Drs Carroll Chapman and J B Marvin who attended the Baptist Convention in Washington City , Dr Ap Morgan Vance who visited Philadelphia, New York and Boston , Dr J M Mathews who delivered the annual address before the graduating class of the Buffalo Medical College, Drs W L Rodman, Thos Hunt Stucky, J A Ouchterlonie, Chas G Lucas, Dudley S Reynolds, L S McMurtry, Ap Morgan Cartledge, Wm Bailey, C W Kelly

ACADEMY OF MEDICINE —At the last meeting the following were elected officers for the ensuing year President, Dr Wm Bailey , Vice-President, Dr James B Bullitt , Secretary, Dr Henry E Tuley , Treasurer, Dr W O Bailey

ASSOCIATION OF AMERICAN MEDICAL COLLEGES —At a meeting of this Association in Baltimore, Dr J M Bodine, Dean of the Medical Department of the University of Louisville, was elected a Vice-President Louisville has again come to the front, and her four medical colleges have joined this Association compelling attendance upon a four years course of lectures before graduation This move of Louisville colleges puts the city way up in the list of prominent medical centers and, as always heretofore, Kentucky has taken a stand for higher medical education by its colleges adopting a four years course There are no better equipped colleges anywhere, not excepting the East, than can be found here the Kentucky School of Medicine with its new hospital and laboratories, the new buildings of the Louisville and Hospital Colleges, and new dispensary of the University of Louisville

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THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, *from* May 4 1895, *to* May 10, 1895

Major CLARENCE EWEN, Asst Surgeon, leave of absence granted on account of sickness, is extended three months, on account of sickness

Capt LOUIS W CRAMPTON, Asst Surgeon, will report in person to the president of the examining board, appointed to meet at Denver, Colo , on May 14 1895, for examination for promotion

Capt RICHARD W JOHNSON Asst Surgeon, *is relieved from duty at* Washington Bks D C and ordered to Ft Huachuca, Ariz , for duty, relieving Major TIMOTHY E WILCOX, Surgeon Major WILCOX, on being thus relieved, is ordered to Ft Schuyler, N Y , for duty

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending May 11 1895

P A Surgeon S S WHITE, ordered to the U S S "Bancroft," June 8 1895

P A Surgeon J W BAKER, from the "Enterprise," and as recorder, naval medical examining board

Asst Surgeon M W BARNUM, resigned from the Navy, May 7, 1895

Asst Surgeon ROBERT BOYD, resigned from the Navy, May 8, 1895

Surgeon M C DRENNAN, ordered for examinati n preliminary to promotion

Asst Surgeon H D WILSON, detached from the "Vermont,' and to the ' Monongahela "

Surgeon H G BEYER, ordered to the "Monongahela "

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ADDRESSES

ADDRESS ON SURGERY

Delivered at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10 1895

BY C A WHEATON, M D
ST PAUL MINN

A retrospective examination of surgical literature since the advent of anesthesia does much to make the thinking student wonder whether the longevity of the human family has been conserved, or its physical welfare materially enhanced by modern surgery That the operating room has been robbed of its terrors by ether and chloroform is conceded That the clinical chart no longer presents the erratical markings of the clinical thermometer as influenced by a body aflame with the products of infection, ignorantly permitted to obtain a foothold in the human economy, is also admitted—but has not our feeling of safety, engendered by our acknowledged perfection in surgical detail, opened a wide field of surgical speculation and experiment which serves rather to enrich the surgeon than to minimize disease and prolong life In my humble opinion the segregation of our professional work is in a large degree responsible for much of the opprobrium which attaches to the over-zealous pursuit of a given theory or special method of doing an operation whose only excuse for being done is the desire to elaborate a hobby The practice of the various branches of our profession to day is practically relegated to the different specialties I would not underestimate or undervalue the great achievements of such men as Senn, Kelly, Price, Polk, and many others in this country, and with such guiding hands as Keith, Tait, Creig, Smith, Treves, Fenwick, Batlin, Heath, and a host of others in the British Islands With continental Europe teeming with the literature of such medical Nestors as Billroth, Charcow, Virchow, Pasteur, Koch, and the prominent members of the present French school, is it any wonder that we occasionally pause in amazement at the accomplishments of the members of "our cloth" in all the civilized countries of the world, and wonder whether it is not all a chronicle that might have been contemporaneous with the Arabian Nights, or heralded by a Sancho Panza That this whole magnificent fabric should have been evolved from an intimate acquaintance with the primary cell, whose intrinsic importance is just beginning to unfold itself to the scientific thinkers and workers in the various branches of our art, is harder to conceive and more difficult to believe than the revelations of the Book of Genesis or its associates in the whole autonomy of man

It is said that "the sovereignty of reason is the sphere of morals, or man's power as possessed of reason to give law to himself" In following this line of thought he who assumes to dictate the destinies of so many of his fellow creatures should be well caparisoned for the fray and should be symmetrical in his professional growth in order that he may discharge with dignity, proficiency and honor the obligations that fall to his lot as a surgeon He can not be such an one, unless his professional superstructure is built upon a fundamental basis, such as is born of a thorough knowledge of all the collateral arts and sciences which bear intimate relation to his life work I believe that the specialist of the future, no matter what avenue he elect to follow, should be a regular graduate in all the branches of medicine, and should serve a sufficiently long period in the field of general medicine to raise him above the level of mediocrity before he assumes to pose on the witness stand as an oracle in nervous disease, or at the bedside to advise for or against an abdominal section I confess to a feeling of sentiment and regret when I think of the decline of the family physician There was a time in the childhood of most of us when that functionary was one of the most important adjuncts of the domestic circle—his edict was law—his coming was a pleasure and his going a regret He was consulted in matters domestic, financial, political, and if his advice was not always heeded it was usually sound and healthful As the nineteenth century advances he is becoming year by year a greater rarity, and I regret it, for I believe it is from the ranks of such men that our specialists should be recruited That time-honored quotation from the early Sanscrit is specially apropos in this connection "A surgeon not a physician is as a bird with one wing" How truthful and full of meaning this old aphorism is—if his surgical growth is not symmetrical, his professional career must of necessity be full of doubt, hazard and disappointment, fraught with wretchedness to himself, danger to his patient, and unjust criticism of his art

A review of the evolution of surgery as a science since the birth of anesthesia, is indeed a wonderful story Operative surgery was practically shorn of its terrors and in less than a quarter of a century thereafter, through the agency of Mr Joseph Lister and his co workers, the possibilities of surgical convalescence were understood, and now with the revelations of the microscope in connection with bacteriology we would seem to be approaching a surgical millennium And we might almost think we had attained it, were it not for some of the license which is a common accompaniment of great victories—I refer to what I consider some of the abuses of nature's (now known) marvelous resources There is unfortunately no longer need for hurry in the operating room, and convalescence is assured in most cases, if we are surgically clean and our work reasonably well done I say, unfortunately, because if the recording angel who stood at our elbow had spoken her mind, we would have been admonished that although we had snatched our confiding victim from the "valley of the shadow," we had possibly also added weeks, months, and perhaps years of suffering and woe to one who might have been spared the long exposure of body surface or vital structures to the curious gaze of one who should have been ready to do the work, and do it promptly, when the patient was ready There is little doubt that anesthesia is responsible for just this abuse of the operating room, and that many a tortured nervous system lives to-day to testify to the truthfulness of this statement Let us review operative surgery in a general way and see what it has accomplished

The cerebro-spinal axis has attained a prominent position in the forefront of latter day surgery, as a result of the painstaking untiring labor of such men as Ferrier, Horsley, Thorburn and others abroad, and a goodly array of fellow-workers on this side of the Atlantic, marshalled by such men as Keen, Roberts, Starr, and kindred students in the same field They have done away with occultism deciphering the many maladies that owe their origin to organic changes in these most important structures The physiology of the brain and cord is beginning to be understood, and fitting surgical remedies are at hand to successfully combat these diseases Craniectomy has come into the surgical lists for recognition as a remedy for microcephalus, but its usefulness is doubtful and its legitimacy questioned by some of our best authorities Laminectomy for the paralysis of Pott's disease is an operation of much less favor than formerly —it undoubtedly had a useful place in surgery when applied to paralysis as the result of trauma resulting from fracture, hemorrhage or inflammatory pressure, but otherwise the limitations of its usefulness are very circumscribed An infinity of surgical procedure has been suggested and practiced for epilepsy but, except as applied to the disease of traumatic origin, all are of doubtful utility One exception possibly may be taken to this statement—in occasional cases of well-marked focal or Jacksonian epilepsy—but then only after the most critical study is surgical interference to be entertained Excision of the Gasserian ganglion for trifacial neuralgia is a comparatively recent acquisition to our list of operations Its environments are such as to make its removal of the greatest surgical difficulty, and it will be rarely undertaken except under the most trying conditions

Although ophthalmology has made such praiseworthy growth since Von Grafe revolutionized the extraction of cataract, it has not been without its surgical peccadillos For example, when the popular clamor against clapping glasses on all offending eyes became of rather alarming proportions, graduated tenotomy was suggested as a remedy for all muscular insufficiencies, without other mechanical means, and it was months, yes years, before operators awakened to the fact that a buttonhole was a very good and permanent aperture in some fabrics, but muscular tissue was not among them Otology also bears its quota of caprices, conspicuous among them being the indiscriminate angling for the ossicles, which would have reached far more extensive limits had it not been for such men as Jack and Blake whose faithful and honest reports have done much to stop this questionable method of treating dry catarrh of the middle ear I think it is generally conceded that for sound conducting purposes, the ankylosed ossicles as a stiff conducting rod between the drumhead and the "oval window" is far better than to have nothing but an air space interposed between the outside world and the broken foot-piece of the stirrup, bound lightly to the entrance of the labyrinth, not to mention an incus supposed to have been removed, which is still crouching in the attic, there slowly necrosing, unmindful that the war is over

The naso-pharynx has become a labyrinth of marvels to the layman as well as the specialist—compromise of its functional integrity threatens the maintenance of all the special senses, its serious impairment is one of the gravest calamities of early childhood and may interfere with all the functions of organic life It is the breeding ground of many of the microorganisms that threaten us upon every hand A knowledge of its anatomy and physiology is an imperative necessity to the successful surgeon There is little doubt that in the coming years the indiscriminate burning, lancing, probing and swabbing will become less general and the treatment of naso-pharyngeal disease will furnish fully as much of benefit to mankind, and less to criticise in its extravagances

The surgery of the tongue, jaws and face has not materially changed in the past decade, except, the improvement noticed in our plastic work about the face, aided by the Thiersch method of skin grafting Esophageal surgery has materially increased its boundaries since gastrostomy has become an operation of comparative safety Drainage of pulmonary cavities and operative invasion of the mediastinal spaces are, fortunately, rarely a necessity

If his statistics are reliable, Professor Halsted has added fresh laurels to his already brilliant record, in his recently published demonstration of what can be accomplished by early and thorough removal of the breast for malignant disease, to my mind it is one of the most important bequests to modern surgery, it bids fair to revolutionize the statistics of this operation The ghastly history of breast surgery will certainly be improved when the laity become aware of the fact that hope of cure is to be entertained if the disease has early recognition and proper operation

In a seriatim review of human anatomy, from a surgical standpoint, one does not invade the infra-diaphragmatic territory without some misgivings It is here that we find a theater frequented by nearly all the specialists The stomach, the gastro-intestinal circuit inclusive of the gall bladder and intestinal tube, kidneys, ureters, appendix, cœci, uterus, Fallopian tubes, ovaries, bladder and the genitalia, male and female

Pylorectomy, and the various other plastic operations for gastric cancer, are triumphs of skill on the part of the operator and of endurance on the part of the patient, but for many obvious reasons should be rarely practiced Gastro-intestinal anastomosis is vastly more humane and will, in most cases, contribute as much to the patient's comfortable longevity The gall bladder has deservedly attracted much attention in the past few years, in suitable cases where anastomotic communication between this viscus and the duodenum is desirable, we have a most useful adjunct in the ingenious device of Murphy—which has proved also a great comfort in operations of emergency where lateral approximation of the intestinal canal becomes a necessity Whether it will supplant the older methods of end-to end union of the divided gut is still a mooted question It seems a queer dispensation of fate that so small an organ as the vermiform appendix should create so much physical woe and so much professional bickering To the man whose faith is pinned to internal medicine (if we are to believe their reviews of its inflammation) it is not commonly the cause of much solicitude To the surgeon who is brought in frequent contact with it at the operating table, and who has so often seen its frightful ravages, "under cloak of modest mien" it is a never ending source of anxiety

I hail, with gratification, the turning tide in favor of honest conservatism in the surgical management of disease within the female pelvis It is a lamentable fact that in this, as in every other branch of surgery, in his evolution from surgical boyhood to maturity as an accomplished master of his art, the surgeon's pathway is strewn with wreckage which can only be atoned for by the greater good he is able to dispense to suffering humanity Every State in the Union has its dozen or more laparotomists mostly gathered from the ranks of the younger men—each struggling to outdo the other in the race for supremacy, and each must of necessity leave behind him a trail of mistakes, misfortunes and accidents A very large percentage of the material from which he gleans his experience is furnished by the female sex, and her pelvis is a most prolific field for adventure If this battle could be fought by the giants who represent the advanced and mature thought of the day, how much better for suffering womankind might it all be The day has gone by when every so called cystic ovary will be removed, when ovaries are removed for symptoms rather than disease, when all tubes will be removed because they contain pus or serum Plastic surgery will take the place of these more radical measures Myomectomy will take the place of many hysterectomies now being done The vaginal route will be the one of election when possible Trachelorrhaphy will not be advised as it too often has been as a panacea for all the woes of women Electricity will be left to the few who care to, and know, "how to use it" And in proportion as the scattered remains of her tattered anatomy and function are restored, her enlarged field of usefulness will be a benediction and a blessing to him who has wrought this change

Bladder, ureteral and kidney surgery has received a recent impetus at the hands of Dr Kelly, of this city, he has made it possible to secure an accurate ocular review of the mucous membrane of the "female" bladder, with his ureteral catheters, accuracy of diagnosis is attained and intelligent therapy, medical and surgical, can be applied

The pelvic extremity of man, just now, is in greater jeopardy than any other part of his anatomy, in consequence of the recent investigations of Professor White, of Philadelphia His remedy for senile enlargement of the prostate is probably not destined to become popular with the sex, but when his comprehensive review of the subject is digested, and we see his deductions and results corroborated by many of the most distinguished teachers in all parts of the world we are constrained to give it serious thought It is difficult to understand why the removal of functionally inert testes should cause an atrophy of the prostate, but that such a result does follow is established by incontrovertible proof We have had no experience in this method of treatment of prostatic disease, but a quite large and successful experience with suprapubic prostatectomy and the known repugnance of man to part with any of his organs, *particularly these*, has prejudiced me against the operation The ingenuity of some of the operators in ureteral surgery has demonstrated the feasibility of lateral anastomosis, it is possible and at times practicable when that tube has been accidentally injured Some plastic operations upon the kidneys have been recorded, but of date too recent to establish their practicability The literature of radical cure of hernia is filled with remarkable records of cure, by many different operators and by many different methods With the exception of the series of cases reported, I think, within the past year by Professor Halsted of Johns Hopkins, none are sufficiently affirmative to make us feel that we ought to advise the operation purely as a cosmetic measure, in other words, a properly fitting truss which amply protects the hernia is a sufficient argument against radical operation There is an element of doubt as to whether the cure will be permanent, and remote elements of danger in the operation

There is little that is new or worthy of special consideration in the surgery of the circulatory system and little to be added to the masterly review of Senn in his experimental surgery on nerve suture Since its infancy, orthopedic surgery has vacillated between the operative and mechanical periods But a few years ago, arthrectomy excision or amputation was about all the attention the joint received Then there came a sudden reaction and mechano-therapy came in vogue and is no doubt a great advancement especially in growing bones I believe America has reason to be proud of its so-called orthopedic measures designated as American

The conservative treatment of joint diseases is without doubt gaining in favor and demanding more attention from the surgeons of Europe Lorenz as late as 1892 states that it is very important that the patient has the benefit of sunshine, fresh air and exercise, while the joint is protected by an apparatus which will relieve the weight of the body from the diseased joint, thus permitting freedom of exercise without pain This has been regarded as fundamental in this country for years The chief danger now seems to be that they carry the mechanical treatment too far, neglecting the operative

Not a decade has passed since a prominent surgeon created considerable consternation among his fellows by making the statement that he believed that a cold abscess when it remained quiescent had best be allowed to remain so Were the question submitted to the orthopedic surgeons of to-day I believe the majority would still be in favor of this treatment

The aspirator is not such a universal instrument as it once was for the opening of abscesses The results have been exceedingly unsatisfactory Even if the flaky condition of the pus does not check its flow through the needle, the abscess cavity refills with great rapidity From the large needle which must necessarily be used and the repeated aspiration necessary, the fibrous wall soon breaks down and we have a spontaneous opening Thus this practice has been gradually abandoned and if surgical interference is necessary at all, a free incision with thorough cleansing is now the practice

Of late years the club-foot shoe has largely given place to the knife and forcible replacement, open incisions, tarsectomy, free subcutaneous division with subsequent retention The very important and useful treatment of manual and mechanical treatment is almost lost of

Mechanical appliances, immediate rectification by osteotomy and osteoclasis for the cure of rachitic deformities seem to be receiving more attention than the early diagnosis of rachitis, and the prevention of the deformities by prophylaxis At present the injection of iodoform seems to be much in vogue, especially in European practice I believe that a great deal more is claimed for it than it deserves That immobilization of a given joint is in a large degree responsible for the benefits derived from the injection treatment

Scoliosis has attracted a great deal of attention in the past, because of the various appliances which have been exhibited, recommending forcible correction, the old treatment by gymnastics hardly seeming to deserve recognition Torticollis has for its treatment the distinction of nerve excision

The various appliances for the relief of congenital dislocation of the hip have been largely abandoned, and now we find the orthopedist scooping out the os innominatum for the reception of the head of the femur

Operative interference is greatly practiced for the relief of the deformity following spinal or cerebral paralysis A good-natured quarrel upon traction as a means of fixation in the treatment of joint diseases shows that some one is trying a hobby, if we are to judge by the Orthopedic Section of the New York Academy of Medicine One would think from articles written and from the number of statistics regarding tuberculous joints, that little if any attention is given any other joint affection, unless it be scorbutic joints which seem at present to be rather gaining in fashion

Orificial surgery, so-called, is one of the recent fads It is conspicuous by its absence from the transactions of all surgical deliberative bodies

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CHAIRMAN'S ADDRESS

Delivered at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY E WELLS KELLOGG, M D

MILWAUKEE, WIS

Gentlemen of the Section on Practice of Medicine, American Medical Association —I cordially welcome you to the forty-sixth meeting of this Section, here, in the same city, where, nearly half a century ago, the American Medical Association, as a newborn infant, gave its birth-cry

This lusty infant passed through adolescence to maturity, and now in adult life, returns to the place of its birth

A vast change has come over the medical profession during these forty six years The division of labor and the specialization of the practice of medicine has taken slice after slice from the so-called "Section on Practice," and yet I believe that with all the specialization there is no section which should more interest every disciple of Esculapius

It seems fitting that at this time we should take a backward glance over the past forty-six years to that first meeting of the newborn Association, and contrast the Then and Now

Such remarkable progress has been made in certain special departments of medicine that many consider the practice of medicine as a whole, somewhat backward But looking over the past years, we can see a progressive change of ideas and methods which, though less marked perhaps than in the special departments of gynecology and surgery is no less apparent, each year adding to the list of boons conferred upon mankind

The changes which have taken place can not be better suggested than by quoting the following from the report of the Committee on Medical Sciences, given at the first meeting of the Association in Baltimore in 1849

"The fact is established that certain etherial vapors when inhaled produce insensibility to pain, and that the most sensitive portions of the living body may be divided by the knife of the surgeon, while his patient lies in a state of unconsciousness"

This astounding fact was at that time one of the recent advances in medicine, and it proved one of the greatest blessings ever vouchsafed to man, yet the committee at that time was divided in regard to their value, one portion considering the limited amount of authenticated facts in relation to the danger of their use, a sufficient ground for opposing them The same committee stated that another virtue still attributed to quinin was its anti malarial effect and ventured the opinion, "That there did appear to be something like an antagonism between quinin and malaria"

The salicylates were unknown Antipyretics were unknown and many others too numerous to mention, the discoveries in chemistry having revolutionized the practice of medicine

As late as 1877 at the annual meeting of the Association the theory that many diseases were caused by minute organisms was pronounced a seductive but unwarranted assumption

As chairman of this Section I am required to present any recent advances in the branches belonging to the Section, but in speaking of the recent advances it is not an easy task to determine which are real advances and which are only apparent advances, to be followed by retreats We, as a people, are prone to follow fads and the medical profession is not exempt from fad followers

The temple of medicine has been slowly building for centuries, and it continues to rise, but many stones are laid only to be removed because they do not stand the test of time and experience The ground is strewn with blasted hopes and exploded theories. Half a century ago physicians bled for everything, later the lancet was obsolete, now it is again being rationally used

The use of antiseptics has been carried to the topmost wave and broken in foam, yet we have learned that avoiding causes of disease is better than removing the disease after it has developed, that the practice of asepsis in medicine as well as in surgery is better than the use of antiseptics, that good hygiene is preferable to the best therapeutics

Serum therapy more than any other one subject has during the past year occupied the minds of the profession

It is with the utmost caution, that I approach this latest form of medication The past year has brought forward a theory and practice, which is either a tremendous farce, or the greatest discovery, in any branch of medicine, since Jenner in 1798 proclaimed to a plague-stricken world, the greatest scientific discovery ever made by man

Toxin is prepared in glass vessels containing sterilized and peptonized broth which is infected with diphtheria bacilli from a fresh culture This cul ture is kept warm for a month when the toxin is filtered off and injected into a healthy horse two or three times a week for about three months, when the animal is considered immune From the jugular vein of this immune horse a quantity of blood is withdrawn and the serum from this immune blood called antitoxin is used hypodermically It is manifestly important that the serum be a pure culture of definite strength, that the diagnosis in every case be a bacterial one, that the operation itself be performed under strict asepsis to avoid the introduction of pathogenic germs, and that it be performed at the earliest possible date in the history of the case

Serum therapy is daily securing new advocates If one half of what has been written concerning Behring's discovery be true it is worthy a trial Its advocates boldly claim that they can abort one of the most treacherous diseases in an incredibly short space of time, that the remedy is innocuous, and produces no untoward effect when injected into the tissues of healthy persons, that a diphtheritic patient's condition, as a rule, greatly improves almost immediately, the exudate subsequently peeling off, leaving a healthy membrane, and that all abnormal appearances often disappear within twenty-four hours, that it is a prophylactic for seventeen to eighteen days against diphtheria

But, on the other hand, some careful observers after a trial of months under the best conditions, declare that the remedy does not fulfill the claims made for it, that its uselessness in secondary infections, in diphtheria of the bronchi, and the unfortunate after-effects, as purpura, albuminuria, hemorrhagica, nephritis, arthritis, and other evidences of systemic intoxication which at times have resulted in death, more than counter balance its good effects

Extraordinary enthusiasm has been shown upon both continents over this new departure in medicine, but a single year's experience is not enough time to determine its value Enough has been proved to determine that it is worth a trial in connection with other better known remedies, and we may well content ourselves to await the dictum of time and experience

The ultimate criterion must be a clinical experience covering a large number of cases under all the varying conditions and circumstances, and this can only be determined by careful work and the lapse of time

The practice is still *sub judice*, and must pass the stage of empiricism before it can be adopted as a curative measure by the general practitioner

In this present age, when new ideas flash around the globe with the rapidity of lightning, when the discovery of to day is upon the lips of the world to morrow, when countless numbers of men are vieing with each other for the production of a panacea for some of the microbic diseases which have destroyed humanity for ages, we may well be cautious of our conclusions until enough time has elapsed to deter mine whether the lights in the horizon be a sign of dawn or simply a will-o' the wisp shining to lure the traveler from the true path into unknown depths

In looking back over the wrecks of previous experiments, the false hopes raised by the advocates of tuberculin, and the well-known fact that cases of diphtheria often recover with surprising rapidity with little or no medication, we can well afford to await the verdict of years of experience before pronouncing it a certain specific

The numberless remedies which have been claimed for almost every disease may well be taken into consideration before we pronounce this a cure for a disease which has long baffled mankind

The tendency of the profession against the use of antipyretic drugs, except in extraordinary cases, I regard as one of the recent advances in medicine There can be no doubt that the use of heart depressants in fevers has been carried beyond the limits of reason, and the reaction has begun

Tuberculosis is each year regarded more as an infectious and contagious disease, and the profession as a whole can not be too active in urging upon the public by all possible means the necessity of regarding it and guarding against it as such The marvelous fact that persons are allowed to systematically travel over the continent carrying and spreading germs of a disease more fatal, more destructive to human life than any other known ailment, can only be explained by the ignorance of the public as to the danger of such a practice, and physicians have a sacred duty to perform in urging upon the laity the necessity of regulating this matter by law

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LECTURES

LECTURES ON INTRACRANIAL SURGERY

X.—THE OPERATIVE TREATMENT OF IDIOCY

BY EMORY LANPHEAR, M D, PH D

ST LOUIS, MO

Continuing the discussion of the operative treatment of idiocy I will first speak of

RESULTS

The immediate danger is little As Packard has said (*Annual of Medical Sciences*, 1891) "The procedure is a brilliant one, but of surprising ease in skilled hands" The primary mortality is about 10 per cent since we have learned exactly how to handle these cases There is commonly a considerable amount of improvement in many of the symptoms within a very brief period—an improvement that may last but for a few hours or that may be permanent, for example, if the child has been restless and inclined to sway back and forth with the peculiar cry of the idiot, there may at once supervene a condition of happy quietude, if of sufficient age, the patient may begin to notice things that have hitherto passed unnoticed—the general condition is very much as if there were a reversion to infancy, in a face heretofore void and expressionless, there may come a look of intelligence corresponding to that found in a baby a few months old, and shortly after the operation, if progress be favorable, there will be a more or less decided change for the better in the mental condition, as manifested in attempts at playing with toys, self-feeding, and by crying when spoken to harshly This change I have seen to occur within a few weeks in cases of apparently hopeless idiocy What the ultimate result will be time alone can tell In some cases there has been a marvelous amount of change—for a time—and then a lapse into the same old state

There were two large sharp osteophytes projecting inward more than a half inch, removal of which caused sharp hemorrhage for a moment The adhesion between the roughened, depressed bone and the dura was very firm After removal of the bone the dura was opened and the brain found apparently normal in appearance and consistency, so the dura was quickly closed and the operation brought to an end This was especially necessary as the child came near dying upon the table from some unexplainable cause—possibly from shock In the evening the patient was resting easily, *no convulsions*, *temperature 100*, *some shock*, but apparently not severe

February 16 *Patient* passed a quiet day, eating well and sleeping soundly, no convulsions during day

February 17 In the early morning the child gave a scream went into a most extraordinarily severe convulsion, ceased breathing, and died

The post-mortem revealed no reason for the death of the child, and it is hard to account for the fatal termination There was, as already stated, complete recovery from shock to all external appearances, and at midnight the patient was reported as out of danger The house surgeon, who was present at the time of death, regards the fatal ending as simply asphyxia from the prolonged continuation of the tonic spasms of the muscles of respiration during the convulsive seizure

This was a case that should have given excellent results, and I should not hesitate to advise operation in every similar one The size of the piece removed may seem extraordinary to those unacquainted with work upon the head, but I have frequently removed pieces of even larger size than the one here shown, without fatal termination I am inclined to believe that the house surgeon is correct in his opinion as to the cause of death

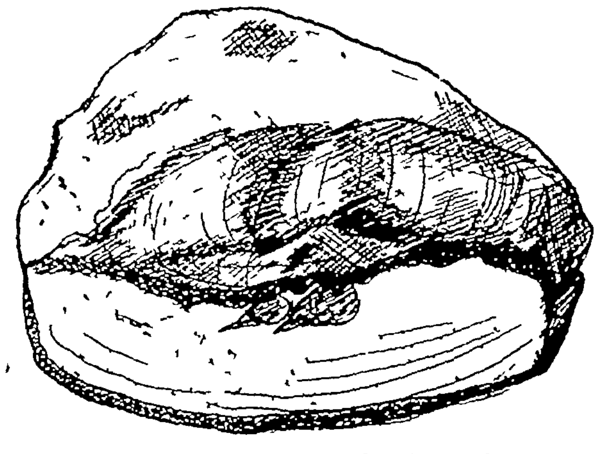

Figure showing shape of piece removed and space in center Actual size Thickened and depressed bone, roughened and thinned bone, and small osteophytes, adhesions

Case 5—Hydrocephalic Idiocy—Operation—Mental Improvement—Lydia W, age 4½ years, Kansas City, Mo, had always been healthy excepting the head trouble, though rather weak and anemic She was apparently normal at birth and until the fifth month was not unlike other children although her head was regarded as *rather large and fontanelles had* shown no signs of closing About the end of the fifth month she began *having slight spasms, the head drawing to the* left, soon afterward her head began increasing in size rapidly and she soon had *well-defined hydrocephalus, from* which she became totally idiotic, she had severe convulsions occasionally, and from five to ten light ones daily Examination showed a head twenty-two and one-half inches in circumference and sixteen inches from ear to ear She had marked protrusion of the eyes and some strabismus At the time of examination the head was hard and the sutures closed, though for long they remained widely separated and projecting as ridges beneath the scalp Operation Nov 28, 1891, after careful preliminary treatment Scalp opened by large horseshoe flap over left side, button removed with trephine, skull found eburnated but not more than one-thirty-second of an inch in thickness The opening was enlarged to about one and one-half inches by three inches The dura was thin and translucent, showing a large amount of fluid below, but no fluid was withdrawn, the scalp was stitched back into position and the wound closed Little shock Duration of operation twenty-six minutes In the evening the patient was resting well and smiling, had been very quiet during the day and slept some No vomiting Temperature 100 degrees On November 29 the patient was in good condition, eating as usual Temperature 99 November 30 she was in as good shape as before the operation Temperature normal. On December 6 the dressings were removed and healing by primary union found A hollow needle was thrust through the scalp and dura and three ounces of serum removed, antiseptic dressings were then applied A slight convulsion was noted afterward December 10 the puncture was repeated No convulsions were noticed, but there was some continuous leakage after withdrawal of the needle On December 16 more fluid was withdrawn, though constant drainage had necessitated changing dressings December 20 three and one-half ounces of serum were removed and one half ounce of iodoform emulsion (10 per cent) previously sterilized, injected A slight convulsion followed January 16, the patient was rapidly improving Withdrawal of fluid and injections were repeated

The people now disappeared and the case was never seen again, but friends of the family recently reported marked improvement in the mental condition—they called it a "cure," the pressure symptoms, convulsions, etc, having disappeared The mental condition is said to be about like that of a child of 3 years

Case 6—Inflammatory Idiocy—Operation—Death—Nicholas L, of Selina, Texas, age 4½ years, came under my observation March 6, 1892 Family history was excellent The health of the child was good until the age of eighteen months, at which time he was as bright as any baby of that age and was learning to talk An attack of meningitis occurred at this period of his life, presenting the typical features of acute inflammation of the meninges It was followed by complete loss of all intelligence and the child remained a perfect idiot until date of examination After securing the history and making a careful examination, operation was advised against, but the parents insisting, the experiment was made A very large piece of skull was removed from over the motor area, extending forward into the frontal region There was great thickness of the dura, and upon incision a cloudy infiltrate was noted in the pia Upon attempting to raise the membrane from the surface of the brain, adhesions were found everywhere over the frontal convolutions, but not in the superior parietal ones, hence the impairment of intelligence, but non-involvement of the motor functions The adhesions included the speech centers as well as the convolutions situated more anteriorly As nothing could be done to secure improvement in this case, the dura was closed with catgut and the scalp united without drainage, there being no hemorrhage of consequence

Death fortunately followed two days later from meningitis I characterize the fatal termination as "fortunate," because the operation certainly would not have done any good It is possible that some cases of less severe degree might be benefited from breaking up the adhesions but I must strongly advise against operation in any case known to be of inflammatory origin I have thought it best to report my fatal cases lest it might be inferred that there is but trifling danger In twelve operations for idiocy I have lost three patients—a mortality of 25 per cent My first fatal result was due to the use of the chisel and to the fact that I operated upon both sides of the head at one operation—a thing I would not do now This case is reported in full in the Kansas City *Medical Index* of February, 1893

Aside from the case of Nicholas L just reported, my operations have been limited to microcephalic, traumatic, congenital and hydrocephalic classes, the remaining cases are as yet too recent to permit legitimate conclusions to be drawn

CONCLUSIONS

From a thorough study of the literature of the subject and careful observation of my own cases, (which certainly have not given as good results as Lannelongue's reports led me to expect) I have reached this conclusion the field is a limited one yet operable cases are so very numerous, the mortality so low, the future of every case so barren of hope without operation, that I can not but believe we are justified in still continuing the experiment But we should make it an invariable rule to carefully explain to the parents that the operation is a purely experimental one, point out the dangers to be encountered, very plainly state that the results thus far observed are not sufficiently flattering to warrant us in recommending operation, and that we can promise absolutely nothing except that the mental condition can not be made worse If in the face of these statements the parents insist on having the operation done, we are certainly justified in undertaking the work in the most careful manner possible, to give the poor unfortunate the one slight chance of relief from an otherwise impenetrable darkness

ORIGINAL ARTICLES

CLINICAL REPORT OF THE PAST TWO YEARS' WORK, AT THE ROCHESTER STATE HOSPITAL FOR THE INSANE

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Much of valuable clinical material is incident to every hospital year, and would seemingly be fitly gathered and rendered available for study and comparison with other hospitals of its class, as well as by physicians generally As a lengthy list of cases would be tedious, we would frame a review of the two years' work, by touching upon those topics and cases which rise above the level of the daily routine, so familiar to us all First, we would add some explanatory comments upon the clinical information, designated by the statistical tables of our report Every hospital report has accompanying it, a list of statistical tables As every official doubtless knows, this information is necessarily very defective

1 *The Recoveries* —Dr A A Christian, of the Pontiac Asylum in an article (*American Lancet*, 1894, p 161) analyzes with great pains a series of cases to show that a large number of so-called "recoveries" speedily relapse, and are more or less recurrent in character That another proportion is not fully recovered, as shown by the test of ability to meet their home duties He finds, after rigidly excluding such cases, only about 17 per cent of true recoveries to admissions, in a considerable number of cases studied with painstaking care Dr Burr, Superintendent of the same hospital, in 1893 urged this same matter before the Association of Superintendents Indeed, Earle's book on "The Curability of Insanity" covered a considerable part of the same ground some years ago

Dr Burr urges the formation of tables which shall be more accurate, but if by accuracy is understood the following of the case for five years after dismissal, it would seem to be somewhat impracticable, approximations being all that are possible any way Tables call for designation of cases as recovered or not, *at the time of dismissal* Public reports, moreover, have to be made regularly, and one can not wait years before making a diagnosis for them The central idea of most value is, that the decision "recovered" or "not" is in each and every case *a matter of judgment*, and that there is no way of having it otherwise That the person making the table can include doubtful cases as "recovered," or call some recovered whom others of equally good judgment would exclude is true It is, however, possible to draw up some lines, forming a basis of judgment which shall be used by all making such judgments, and therefore a common standard be secured This is the aim as I take it, of the resolutions adopted by the Psychological Association The personal quality of painstaking judgment in the one making the decision, and a common standard seem to be what are required To follow patients, however, after leaving here for all parts of the State seems hardly practicable, and most of them have no friends with sufficient judgment to make an accurate report

Aside from any "judgments," however, our total of curable cases admitted (which as Dr Chapin suggests in his late report would be those selected by a general hospital in its estimate of results) is at a close approximation and excluding inebriates, about 266 out of a total of 621 insane admitted This, however, leaves out of account chronic mania, and chronic melancholia, as well as the senile degenerations, paranoia, paresis and others But these cases designated as chronic, (over one year's duration) occasionally recover Adding these to our list, then, we have a total of 397 out of 621, to be considered upon admission as recoverable cases, leaving 214 or 34 per cent who would be considered incurable usually on admission Of these 397, some are recurrent cases It might be said in general, then, that 35 per cent of the cases admitted to this hospital are clearly incurable at the time of admission A personal canvass of each case, however, reveals that most of the so called chronic cases are also practicably incurable, and therefore 50 per cent would be more near the true figure

A caution is needed here, by "curable" we do not mean *treatable* General paretics and others need treatment Probably from 70 to 80 per cent of cases need treatment, slight or great, upon their admission, although later they may drift into a chronic and stationary state

2 *Age of Admission* —Sinkler, Harriet Alexander, C K Mills, Sarah Weldt and others, have in the past two years had their interest excited, and have gathered some cases of insanity under 10 years of age It is admittedly, however, rare and tends toward epilepsy or defectiveness The great tendency of insanity is to wait toward the decline of life As if forsooth, the impetus of natural endowment or constitution carried a man past the most vigorous time, only to be caught as the powers of life naturally begin to decline The average age on admission here of over three thousand cases, is approximately 38 years The average of cases coming into this asylum, then, are at what may be called the beginning of the decline of life

3 *Causes* —In our table of the causes alleged by physicians and friends on admission, there is necessarily so much of error as to make it of little value We do not know enough of the history to correct more than a few of these causes, and the examiners are apt to put down impromptu, that which has been the last stirring event, or most prominently suggestive or suggested by the relatives This is copied in by us,

only correcting it as our knowledge will occasionally allow But, aside from all this, it is to be remembered that it is rare that *one cause alone* is responsible for the disease, and moreover that a clear distinction as possible is needed between predisposing and exciting causes For this period we have carefully considered these causes, and have tried to classify them so as to suggest prominent and leading causal factors

We firmly believe that *heredity* is the chief predisposing cause Heredity must needs have no narrow sense, however It must be broadened out so that it means both, "if the patient is peculiar, eccentric or partly demented, and the son goes to the asylum an acute raving maniac and, on the other hand, if the parent be a raving maniac, and the son have only the quiet unnoted feebleness of mind But in all statistical tables neither of these cases would find any recognition, nor are many others of indirect heredity recognized at all" These tables of heredity only recognize insanity in a near relative, so gross as to be well known Indeed a large number even of these are denied to us

Recognizing an inherited or inherent brain and nerve instability as the predisposing cause, then we feel that it must almost necessarily be present to allow for other causes to act Probably this is the most important topic in our list It would seem, in looking about in the world, that you could sum up and pile all of the other causes on one man and he would not become insane because he had *not* this inherent instability Without being able to define this most essential element in the cellular nervous structure, we would yet say that it is to an extent recognizable in the same way as is the tendency to consumption, in the consideration of which it is fully as manifest that some men will go through all of the causes and never have the disease, consumption These latent, inherent predispositions of the body are hard to define, even with the use of modern terminology, yet need not be therefore denied But heredity of the indirect though real form, can not be reduced to statistics Of direct heredity, we find 84 men and 58 women, out of a total admission of 374 men and 247 women This is probably much too low even for the direct form, but incomplete information is not preventable

4 *Forms of Insanity* —It is seemingly very important to have a table of diagnosis of the forms of insanity, but a close thought would reveal that it is really, however, not so important as it is to have *uniform methods* of naming the form among different hospitals But we doubt if any two hospitals for the insane in the United States have exactly the same list of names The distinctions between the different forms, even if made by experts, being in many cases transitory or unessential, it is the broad types which the far-seeing alienist wants, not particular names There is a type of "general paresis," and particular cases conform with more or less closeness to it or lean over toward other types There is the type, "senile dementia," and special cases conform with more or less closeness to this type, or vary toward the paretic or apoplectic type There is the type, "acute mania," and only a few cases adhere closely to it, many having a quite distant approximation, while some are on the border line toward melancholia or senile dementia, and so on through the whole list The sharp lines drawn are all in our imaginations They are arbitrary The cases are not fenced off into pens, as we would fence a drove of animals, but are scattered over the whole field, and each may imagine his own fences arbitrarily However, one set of boundary lines may be far better than another, and we should, as far as possible, select broad fundamental differences For example, youthful cases are apt to approximate the defective or feeble-minded class, having superadded variable and vacillating exacerbations, upon a gradually increasing mental trouble This is a far more fundamental distinction than is the transitory and varying maniacal or melancholic behavior of any particular time "Pubescent insanity or developmental insanity" are names we have used to designate these cases, names more true than those of mania or melancholia

The distinctions, "acute" and "chronic," are only arbitrary, and are by some discarded altogether To call all cases under one year's duration acute, is a common method If some committee could be appointed with authority to enforce the use of some list of names, we all ought probably to sink our preferences in favor of uniformity Of the acute manias we have made two classes, the acute disease which rises to a climax like a fever, with its typical excited incoherent speech and conduct A second class might be probably called sub acute, it includes the exacerbations of mildly affected cases, very slowly progressing cases approximating chronic, yet not over one year's duration as reported by relatives and having no acute rise as far as known Of these two forms the former (the only true acute mania), we have in a total of 621 admissions only 54 cases as shown by our tabular analysis Moreover, even of these 54, only about 20 were of the extreme maniacal type, with flushed face, trembling incoherent speech, etc, approximating the type, "acute delirium" Adding to these the 130 cases of *acute* melancholia, and we have as approximately the sum total, 163 cases in 621, in which insanity was distinctly an acute disease, rising to a climax, and unassociated with any gross brain lesions, like those of atheroma, paresis, senile dementia, etc

"Syphilitic dementia" designates the dementia produced by syphilis If a mania or melancholia is accompanied by syphilis it goes among the other manias, and syphilis is put down as a cause This is due to the predominating tendency toward dementia as a sequel to syphilis

"Choreic dementia' is subdivided into the dementia of the adult progressive chorea and the "juvenile" form, according to the very different characters of chorea producing the trouble

The melancholias are subdivided into the agitated and stuporous forms, to meet the usual distinctions made as to behavior

"Puerperal" is put down among the list of causes, and the manias so produced are included among other manias, this seeming to be the most just and accurate way

5 *The Causes of Death* —These cause some perplexity It would seem best to have the immediate and fundamental causes given separately The word "exhaustion," perhaps, causes the most question Exhaustion usually means tire from activity, in insanity it frequently does not For example, in general paresis or senile dementia, it means a gradual deprivation of central nerve power The cortical impairments of these troubles easily suggest the cause The substitution of the immediate for the fundamental cause

is avoided as much as possible "Heart failure" was, however, necessarily used in several instances, for example, one old man failing somewhat from senility, died suddenly and quietly in bed a half hour after eating a good supper He seemed well, and as no autopsy was held, and atheroma did not seem prominent, "heart-failure" was designated as the cause

"Acute periencephalitis" has been used to designate the cause of death in cases following H C Wood's designations The five cases so named could be termed subacute meningitis doubtless, if we so wished They seem to fall halfway between acute delirious mania (or the "acute delirium" of recent writers) and ordinary meningitis No autopsies of these cases were secured Among the total number of deaths of 131, we find that 40 are from pulmonary tuberculosis, and 39 from general paresis Epilepsy claims 8, apoplexy 4, senile dementia 13 and brain disease 11

6 *Occupations* —The occupations are systematized and condensed on the fundamental lines of a probable leaning toward mental impairment, and do not well sustain the idea of brain strain or mental overwork as a factor in producing insanity A preceding defectiveness is the most prominent element

Leaving now the statistical tables, there are other subjects which have received especial study and consideration during the past two years "Phthisis and its relation to insanity" was quite thoroughly looked up by Dr Sarah L Phelps "Strychnin—the use of in inebriety," was made the subject of an experimental study The general consideration of "Inebriety" as a curable disease was considered "Hereditary chorea," and its relationships, and "Periodicity in insanity," were made subjects of articles Of phthisis or pulmonary tuberculosis, Dr S L Phelps, from analysis of evidence, concluded that there was no mysterious connection with insanity, that it produced no especial form of insanity, nor did insanity, except in the various *indirect* ways, produce the lung troubles Confinement, inactivity, extremely careless habits of neglect, extreme neglect of all voluntary sanitary measures, predetermining toward tuberculosis, producing a somewhat larger proportion of cases than among the outside population, even if among selected people of the same ages Looking over our record we find that we have had 40 deaths from tubercular disease of the lungs, during the past two years, out of a total of 131

Dr Channing recently (*Boston Medical Surgical Journal* July 19, 1894) assumes tuberculosis to be the cause of insanity quite definitely, following Clouston in his ideas of the disease, and asserting it to be about three times as prevalent in asylums as among the sane Later study, however, it seems to me shows many corrective facts The average age on admission to hospitals for the insane is here about 38 years Statistics among the sane usually include all ages, of which the total adult population is but a fraction Again, most cases of tuberculosis in asylums are among melancholiacs and dements, who sit inactively for months, and neglect, as far as they are personally concerned, nutrition and exercise, which are the two main preventives of the progress of tuberculosis Sane people do not so neglect themselves Again, the insane are careless as to cold-catching and exposure, the sane are not The insane have a tendency toward sedentary life, as in most cases the sane do not

Dr Channing found the average number of deaths resulting from tuberculosis among the insane, to all deaths, to be about 16 per cent which is about our average here This is hardly, however, three times the proportion of deaths from tuberculosis outside, which for persons at adult age, say from 35 to 45, the average age of the insane seems to be nearly (perhaps a little over) 10 per cent while for all ages it seems to be only about 5 per cent

Of evidence of tuberculosis as the cause of insanity, we can add little that is new from this two years' record In two cases of admission here, tuberculosis was present on admission, and progressed coincidently with acute typical mania, both dying in a few months One was a case of a girl aged 18, who had been some five years previously treated here for a similar attack, and had quite fully recovered Tuberculosis was in the family history She failed rapidly, dying twenty-three days after admission Another, an old lady, aged about 61, approximating somewhat the senile age, yet had an attack of quite typically acute maniacal behavior, the second one in her life, it leading on rapidly to death from pulmonary tuberculosis in the same manner as the preceding case, about six months after admission Among the forty cases of deaths during this period these are the only two, however, suggesting in any way a causal connection, and we fail to see any distinct evidence, more than a coincident one, in these cases Ordinarily these consumptives are quiet melancholiacs or dements In the forty cases mentioned, twenty six were melancholiacs and nine terminal dementias, one, chronic mania, one, mania a potu, one, morphinism Only four cases were at all active ones

General Paresis —General paresis is a subject always calling forth peculiar interest As will be seen, we have thirty-nine deaths from this trouble, this period, thirty-three men and six women This is a large and important element in our death causation More sad still is the fact that once diagnosed, treatment will only delay the fatal termination, never prevent it It receives extended study, however, not so much in hope to cure, as to study its forms and causes and to secure such thorough knowledge as to prevent to some extent its invasion The causation is still somewhat vague Continued study only goes to show that though syphilis is considered the most powerful cause, that all intemperance and excess seem to help its onset Too little attention, perhaps, is paid to the element of *predisposition* in this case For it is evident upon a broad outlook that while the causes of paresis act upon an immense number of people, only a few of them develop the disease, general paresis Lack of space prevents giving a synopsis of the thirty-nine cases

Under general paresis it should be said that more and more cases have come to be included, which once went by other names Senile cases of strong paretic form, also gross brain lesions of various kinds, which have tended to produce the same sluggish paretic state, and even to have considerable of the same progressive tendencies, tend to receive the name We have not space to review the thirty-nine cases which during the past two years have proved their diagnosis by a rapid progression and death, but will mention a few summarized facts concerning them

Of the thirty-nine deaths, thirty-three died in exhaustion, by which is meant a steady progressive failure, without other special bodily trouble One died from choking, one from meningitis, two died from convulsions of an apoplectic form, and one from a series of convulsions, simulating status epilepticus. One died with erysipelas.

Concerning convulsive seizures in general, it is to be said of the thirty-nine, that nine had at some time during the course of their trouble, convulsions of a decided character, while seven more had "spells" which approximated unconsciousness, with or without convulsive movements. Their average age on admission was 41 years; the average duration of their stay here was one and one-fourth years. To this duration, however, we would add the probable average duration of each case before being admitted to this hospital, of from one to two years.

Chorea.—Of chorea we have had examples of the varied forms; have had two cases in youth, (one aged 18, another 20) in which the mental weakness and confusion of mind was coincident with the chorea, seemed to be caused by it and receded with its recession. These we have designated as choreic insanity "juvenile," to differentiate it from the radically different adult form. We have had two more cases of the adult progressive chorea with choreic dementia, one of these giving a vague history of "hereditary chorea" form. We have had two marked cases of the so-called "post-hemiplegic chorea," also one case of most extreme chorea with imbecility.

There was also one case of a sudden outburst of chorea of most extreme form, coming on within two or three hours at the beginning of a relapse of typhoid fever. The mental state in this latter case was a hysterical delirium, culminating in this choreic attack with quite complete helplessness. This case, a young girl of about 20, recovered very perfectly.

The most striking case of chorea was one of acute form, producing death, coming on about a year after childbirth. This case is published elsewhere, (*International Medical Magazine*, February, 1895) as also a case of prolonged lethargy of nine months duration and one of adult bilateral athetosis, idiopathic in character.

Paralysis Agitans.—Two cases have been admitted during the two years just past; one a woman aged 70, having dementia of the senile, weak, childish form, without defined delusion. The other, a man of nearly the same age, also demented, with delusive ideas feeble in character. It is doubtful if a special kind of insanity should be so named; it is probably enough to record paralysis agitans as the cause, with the mental reservation that it is perhaps merely the concomitant element.

Jacksonian Epilepsy.—Jacksonian epilepsy, in the sense in which is meant an epilepsy with some localizing motor spasms, is rare in the advanced cases presented here. One case in which epilepsy followed a gross brain injury of seventeen years ago presented itself. This man, in spite of a trephining, had been epileptic for some seventeen years; had been at times somewhat actively deranged mentally, but usually only when he drank, which he did at every chance. He recently, while here, began having fits more severely and showed more of mental derangement, and after some of them there remained a numb feeling, a lack of power in one hand, with some occasional involuntary motions of the fingers. These motor symptoms in a general way, corresponded with the locality of the scar upon the opposite side of the head. Dr. Charles Mayo on consultation agreed to operate. Before consent of relatives was obtained, however, patient went into a status-epilepticus, out of which he was brought by the use of nitro-glycerin. Was then in a semi-delirious condition. Operation was successful; scar was found to be not all bony, and directly under the scar was a cyst holding about two ounces of fluid. Patient had one fit the next day, but in the course of about two weeks recovered his ordinary mental state, and eloped from this place reaching home safely.

Gross Brain Injury.—A man was admitted here, in 1893, with a large irregular opening of nearly two square inches in the skull, above the inner corner of the right eye. This had been produced by a supposed intentional suicide, with a gun. The brain lay exposed and pulsating to the view, though covered by a coating of purulent deposit. A probe reached indefinitely back along the surface of the brain; brain matter to the extent of a teaspoonful or more was said to have exuded, and was removed after the accident. He was obliged to keep his face forward, for the drainage of what was practically a large open abscess cavity. He began to have some fever, went to bed, seemed to be failing, and his people were sent for on the strength of a bad prognosis. They took him home, however, and a month later sent for his discharge, on the plea that he wanted to do some business. He had, while here, no motor symptoms or paralysis, and was only a case of ordinary mild melancholia. If accurate data could have been had as to amount and exact location of the brain matter removed, the case would have been of considerable value.

Acute Alcoholic Dementia.—This is the designation of one of our cases, and would be of one more, except that the second one came upon an inebriate warrant. As the term might be perhaps misleading, I give the case briefly: a man, aged 50, was here several months as an ordinary inebriate. He went home on trial, and a few months later was committed as insane. He was then found to be completely demented, and in a condition closely resembling general paresis. His face was blank and smooth in the extreme; his memory almost gone, talked fairly free and very peculiar; polite in form, although his ideas were mostly imaginary. Speech was hesitating but not much slurred. In this state he has continued for the eight months which have since elapsed. The causation in this case was acute, and the result is quite different from that of a case of chronic alcoholic poisoning; and therefore we have given the distinguishing name.

Primary Dementia.—This is used to signify a number of cases in which there is a slow growing demented condition, such as is produced by alcohol without any especial mania or melancholia. In some cases, however, there seems to be no alcoholic history or other like causation upon which to base the designation. To these we have given the name, "primary dementia" in that we have considered them too different to come truly under any one of the other designations. These cases are usually of adult life, and could not therefore, as would be otherwise quite possible, combine with the pubescent cases. These could be forced into other classes by distribution, but it would seem could not be done without obliterating importan distinctions.

Use of Strychnin in Inebriety.—Among other subjects which have received special study during th past two years, the preventive action of strychni upon inebriety was studied by an experimental trial in twenty-five cases, in the firm belief that this was the active element in Keeley's cases The results were published Though averse to having any seeming connection with Keeley's methods, yet of its possessing an action above any suggestive one, there seems to me to be no doubt That the suggestive element must be relied on to carry on the effect, however, there is also not much doubt, as the drug action is only a temporary one That it can be asserted to be logically the best drug for the purpose is, however, in my opinion very probable

Our opinion as to the value of hypodermic injections of strychnin in combating the craving for alcohol, was practically re affirmed two years later by Dr Breed, (*Philadelphia Medical News*, April 7, 1894) who outlines in a similar manner its direct value above that of a suggestive one, in annulling the appetite of the inebriate, "and that without the least effort on his part" Its strong tonic action is also dwelt upon Dr Breed, however, was a little too near to the first enthusiasm of the immediate effect of the hypodermics to judge conservatively of their permanent value He assumes inferentially, moreover, that the drug effect is a permanent one which seems to me a great error Suggestions, fear and moral effects must keep up the waning influence of the drug (I have often wondered if the administration of the drug could be kept up either in small doses or in an intermittent way, so as to insure permanent effect) Dr Breed also speaks of the hypodermics of strychnin as if new, whereas during the past two years it has been frequently mentioned, and our own idea two years ago was gotten partly from the references to the records of Russian and Italian physicians, the experience of whom I believe goes back as far as 1880, and from whom I suspect Keeley to have adopted and developed the idea Partly also my incentive was from Dr Gray, who claimed to be using it in his Sanitarium at La Porte, Indiana, and whose methods rather than Keeley's were the ones that I adopted We used here the nitrate of strychnin, especially prepared by Eli Lilly, for such treatment

Partial or modified responsibility This somewhat philosophical subject, running out on theoretical grounds, yet being of far-reaching practical value, the "partial" or "modified" responsibility of some people, was strongly advocated as needing a recognized standing in an article before the State Medical Society this year The connection of Bright's disease with insanity, strongly and ably advocated by E D Bondurant of the Tuscaloosa Asylum, stimulated us to an extra effort to see if we could justly admit ourselves to have overlooked such fact Aside from the consideration of *any* theory of connection, however, we could not find any such facts of albuminuria and casts as he detailed We found even after *some* selection of cases, only about 13 per cent of cases, and probably we would average not over 5 per cent of the admissions, whereas he found about 85 per cent in consecutive examinations, some 50 per cent having *both* albumin and casts Drs Bennett, Tuttle, Christian, Amelia Gilmore, Babcock, Norris and others have all studied the subject with varying results *Landon Carter* Gray's recent article also falls in the same line

Treatment of Choking—In connection with Training School work, there has originated a peculiarly useful mode of treatment in cases of choking which, so far as I have noted, is not mentioned in any textbook on nursing In one case of choking by meat, when the finger could not reach the morsel, and the man was becoming comatose before my eyes, it suddenly occurred to me to reach with thumb and finger deep down behind the sternum, to pinch the windpipe and strip it upward, thus carrying the contents up into the throat It was easily and promptly executed, the meat taken from the mouth, after which three minutes of artificial respiration brought him to life So simple and fairly sure is this procedure that I should now think that one of our nurses was neglectful of duty who did not try it in any similar case

Hypodermics of Nitro-Glycerin in Epilepsy—In last year's literature several references were found as to the value of hypodermics of nitro-glycerin in checking the convulsions of epilepsy Upon having a case of status-epilepticus in a young girl, in whom a comatose condition had been present for over twenty-four hours, in whom the temperature had reached 104 degrees and who was considered as surely going to die, the idea of trying these hypodermics was considered The very first one was followed by a reviving effect, and a continuation brought her from the coma and fever to her usual condition in, approximately, about four days She has been as usual since This seems to me a quite noteworthy and unexpected effect The hypodermics were tried later in the case preceding trephining, as outlined elsewhere, and with good results This is the last case of status-epilepticus which we have had here We have tried the remedy on the mental confusion of an epileptic state with somewhat of temporary benefit, and are trying it now on various other epileptic temporary conditions that come up from time to time Its permanent benefit must as yet be considered very doubtful

Massage—This was first introduced systematically last year The very first case taken by the members of the class in massage, a case of "post-operative" exhaustion or shock, progressed so steadily and logically toward health that it acted as a great incentive to the class to continued work The case was one of confusional state of mild melancholia, and the Wier-Mitchell treatment of rest, massage and electricity was very effectual

Contagious diseases have been very rare in the hospital During the last two years, however, we had several cases of measles and several of mumps, in all but two cases, however, among the employes We had three cases of typhoid fever, all sent to us from the cities We had no dysentery except in isolated cases during that period

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CHRONIC INEBRIETY—FROM A MEDICO LEGAL POINT OF VIEW

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The chronic inebriate appears most frequently in the lower courts charged with crime against persons, and also minor grades of crime against property He is commonly a continuous drinker, taking spirits daily, and to excess, when he has the means to procure it, and the conditions are favorable, or a periodic drinker with distinct drink paroxysms, at uncertain or definite free intervals The paroxysms subside usually from exhaustion, and begin again when a degree of restoration comes on Such persons are more commonly laborers, mechanics, barkeepers, boatmen, hostlers, and others of servile occupations A certain number have descended from higher levels of business and social life, and a certain percentage are wrecks from various disasters, but the larger proportion are degenerates from inheritance, and have never been able to rise above the present levels In appearance an irregular shaped head, face and body are often prominent Often they are of large coarse frame, or small irregularly developed bodies, with coarse, bushy, or thin, straggling hair, irregular projections or defects of the nose, mouth or eyes The entire body seems to be stamped with signs of imperfect development and degeneration Such persons begin to use spirits early in life and are usually intoxicated at or before puberty

This drink impulse is often associated with danerous sanitary conditions, with irregular, unhealthy living, sleeping in bed-rooms insufficiently lighted and ventilated, and living on bad, innutritious food, also in a bad mental atmosphere Add to this the continual indulgence of all the impulses and passions, in surroundings full of the contagion of bad examples, and the result is inevitable There is here a constant widening perversion from the natural standard of mental and physical health Exhaustion and drinking of early life is followed by degeneration, which affects the entire organism Ambition dies out except for the most selfish gratification Criminality grows out of these surroundings as naturally as weeds spring up in a neglected garden The evils they suffer from perpetuate themselves, and grow more and more rank All effort to rise to better conditions of living and acting involve the exercise of powers which are either wanting, or are feebly developed, or early crushed out by the predominance of other elements As criminals they always lack the boldness of experts, usually they are followers acting under the guidance of others, and are sneak thieves, petty swindlers, gamblers—ready to engage in any scheme that will furnish sources of gratification to their passions, without much danger or special labor As inebriates, they drink insanely for a time, governed by circumstances and conditions Some of these cases are reared in bar-rooms and the lowest circles of life, and have the marks of pronounced degeneration Others come from the wealthy classes, or in those inheriting large amounts of property and have grown up without any fixed purpose in life Not unfrequently they have squandered their patrimony, and been placed in positions where all efforts to help themselves have resulted in failures They are ordinarily marked by a weak mind and unbalanced judgment, and suffer from neurosal and mental troubles, and are filled with delusions of oppression and wrong at the hands of others Conscious that society is at war with them and its methods antagonize the full play of their passions, they accept the situation and never seek to change or vary the conditions Finally, they rapidly become beggars, criminal paupers, robbing their relatives and friends, also lapsing into communists, full of all the small vices, ready at any moment to aid in crime, or take advantage of any weakness, licentious and drunken at all times, and resorting to the lowest devices to gratify their impulses Syphilis and general degeneration are common—improvidence, fawning, and audacity are marked In some cases they possess an apparent average or superior brain power, coupled with a defective moral force, and general want of control They are more prominent as inebriates than as criminals, and often do criminal acts under cover of apparent drunkenness This class are the skeletons haunting their friends continually for money and support, rarely committing noted crimes, but always in centers of low dissipation

The second group are made up of persons who have been clerks, traveling men, peddlers, gamblers, and swindlers of all kinds They are higher up than the last class, and possess a degree of activity which is evidence of more brain-power Quack doctors, police, lawyers, defaulters, and patent swindlers are of this class They frequently inherit an unbalanced organism and a distinct degenerative diathesis, with a family history of insanity, epilepsy, inebriety, syphilis, criminality, cancer and consumption

Like the first class, they are largely the outgrowth of the surroundings, originating in bad sanitary and mental influences from early life The worst phases of this class are seen on the frontier, as miners, speculators, and gamblers, or in business centers of large cities, as brokers, agents, and middle-men, who are ready, with any excitement or excuse, to defy law and order As communists and railroad rioters they have attracted much attention for some time Frequently they are filled with delusions of wealth and power, are superstitious of fate and chance, and alternate between hope and despair Failure follows in nearly all circumstances of life, and is attributed to others, and the wrongs they suffer at their hands While complaining bitterly of the dishonesty of others, they continue to cheat and drink in an aimless, impulsive way They have appeared in the temperance work in great numbers, and have been noted as defaulters in coffee-house enterprises, and as lecturers recounting their experience, and soliciting help to build up again, etc With a degree of sharpness and low cunning that is rarely obscured by drink, they have found the various temperance movements of the day a field for the fullest play of all their talents, which they are not slow to occupy They are truthfully called the temperance tramps of the day As inebriates they are noted for their marked periods of sobriety and the unexpected, insane-like relapse, which seems to be partially under the control of the will After the fullest gratification of the disordered impulses, they stop short and seem to recover They commit crime in this impulsive, unreasoning way, confusing courts and juries as to the motive present In asylums and in prisons they are always the most hopeful, and are sure to create sympathy, and gather about them friends which they sooner or later victimize

In both of these groups the surroundings and predisposition to criminality and inebriety are about equally developed, sometimes one predominates over the other, and in some cases they exhibit much skill in concealing the one or the other, profound degeneration and suspension of the will and moral power is present in such cases They never realize anything but the fullest gratification of the lower faculties as the ideal of life, and criminality and inebriety are the best means to this end They suffer from neurosal disorders, such as exhaustion and a special degeneration of the nerve centers Either from a non-development or a general perversion of functions and structure, they are born both inebriates and criminals

Such persons are usually marked in every community by their irregularities of living, and mental peculiarities, as well as physiognomy They appear as inebriates in all grades of crime, and are seen in prisons, hospitals and work-houses, all over the world, and are frequently studied in courts of law and insane asylums, as types of all inebriates Literally, they are all moral imbeciles, that drift up and down the world like ships without a rudder or compass

They are committed for crime against both person and property, and constitute over 50 per cent of all the inmates of prisons and jails Not unfrequently they occupy places of trust in society, and when tempted fall precipitately, and puzzle experts and judges to determine between insanity and criminality, and the measure of responsibility

The inheritance of disease is more marked in this class than others Dr Stevenson remarks "There can be no question but that heredity exists in the mental as well as the physical world, and that the diminished stability of organism and perversion of physical function are transmitted with as much certainty as the germs of disease, that brain structures receive certain tendencies from inheritance, which bind it down or control its future, or that it has a certain capacity for impressions and energy of organism which goes with it always after"

This expresses clearly the doctrine of heredity which is now accepted as an established fact The inebriety of this class is of the same order of neurosis as insanity, and depends upon some molecular change of cell and nerve tissues, which coming down from parent to child fixes the mental and physical character with certainty In other words, it is a symptom of physical degeneration of the nerve centers, an outward expression of an inner condition of disease, always connected with degenerate undeveloped cell and nerve structures All this is confirmed by clinical histories of numerous families where, for generations, the criminal insane and inebriate neurosis has developed in one or more of the family

Such persons possess a distinct neurosis, which manifests itself either in inebriety, criminality, or pauperism, or, very commonly, two or more combined in one This degeneration may not be tangible to any physical examination, but later, the autopsy and microscope often indicate distinct cell changes

When a certificate of continuous and excessive use of spirits is ascertained, there is specific degeneration of both the brain and entire organism If the history indicates a diseased ancestry, this degeneration is more pronounced The direction of these defects will be toward imbecility and general paralysis In one case a low type of conduct and reasoning will appear, and sharp reversion back to mere animal life are the prominent features In the other, mental exaltation appears with delusions of power and capacity, beyond all ranges of reason and observation The brain is disorganized and weakened A progressive dissolution has begun which is apparent in the general depression and failure of all the mental activities Such cases use spirits more uniformly, and are more stupid from a less quantity of drink and grow more incapable of work, muscular control of the body is lessened, the use of the hands and legs becomes feebler, memory fails, and ideas and judgment are faulty Apathy and indifference to himself and surroundings, and no thought except to procure spirits are often prominent Excitability and irritation occur in some cases and crime follows, which is usually impulsive, unreasoning Assaults are committed on any one, both with or without provocation and no apparent realization of the act and its consequences are noticed

The following are some common examples a chronic inebriate of this class stumbled and fell on the street and was helped up by a stranger who jokingly alluded to his condition He seized a stick and killed the stranger without a word or exclamation, and continued his walk down the street all unconscious of what he had done Another man of this class shot a stranger who looked at him closely on the street, attracted by his staggering gait and manner In a third case an inebriate killed his wife because she did not have dinner ready when he came in These are common examples of chronic inebriates in a stage of dementia suffering from paroxysms of irritability and delirium The dull apathetic cases are often involved in crime against property They are stupid thieves, coarse bungling swindlers, and commit assaults and even murder when driven to it by circumstances Seldom any premeditation is associated with crime they commit, and the same indifference is manifested as to the consequence of their acts

When these demented cases develop symptoms of general paralysis, most commonly noted by mental exaltation and mild deliriums of strength and power, crimes against person are common If against property it is from the suggestion and direction of others Such cases become noted for their prominence in conversation and manner, and general recklessness of conduct They drink at all times and are not often intoxicated or stupid from spirits, but are always impulsive and vociferous, never resenting insults by violence, and growing more and more egotistical In the early stages they are politicians and reformers, and enthusiastic followers of every new movement that is revolutionary or lawless, later, they are senile egotists who boast of their influence and power Often such persons are bigamists, and accessories to criminal acts, assisting and concealing crime and criminals While such crime may show reason and cunning it will always lack in consistency and uniformity of conduct, and be noted by blunders and bad judgment in all their acts The secretiveness of one stage of the criminal act, will break away into the most transparent expression of his purposes and motives in another His denial of acts and explanations of suspicious conduct will be thoroughly imbecile and childish, and convey the real truth more accurately than confession of any kind Statements of crime, either as witnesses or participants are of no value unless confirmed by other testimony Some of these chronic inebriates manifest an unusual susceptibility to the personal influence of others Particularly to some favorite bar-keeper who furnishes the spirits, or some woman along the same line of living, and but rarely for any one who antagonizes his mode of life and conduct This is practically a hypnotic power along the lower levels, and on the plane of everyday life But it varies widely in uncertainty and brevity The hypnotic control of a chronic inebriate is very unstable, and while it may be used for the purpose of crime, can not be depended on to conceal it To make a man intoxicated and suggest crime to him is not unfrequent, but the commission of the act depends on a wide range of circumstances that may vary any moment, circumstances that the operator has no control over, and conditions that must be in harmony or the act will fail

A saloon man sent an inebriate to set fire to the home of a temperance reformer The flask of spirits to give courage for the act brought on a stupor, and after a short sleep, and confusion of mind he built a fire in the barn of the saloon-keeper by mistake In another case an inebriate was urged to kill a certain man, and partially intoxicated was led out where he could commit the act He evidently became confused and began firing at every moving object, then when his victim appeared, confessed that he came to shoot him, and after an emotional period of weeping offered to kill the man who sent him on this errand Often the statement is made by chronic inebriates, that persons have suggested crime and offered to reward them for the commission of such acts, but why they were not committed was not clear In reality the inebriate mental condition is so uncertain that but a limited range of criminal acts can be committed only from the most favorable circumstances, especially crime by suggestion from outside sources

The man who is apparently under the influence of some companion, who urges him to commit a criminal act fails because of some slight obstacle at the time or some sudden change in his mental condition Such a case may go home and kill his wife or some other person on the slightest provocation, or commit some strange crime, without suggestion and from a passing impulse The suggestion to have committed this crime any time before would have been unheeded and failed

In reality the chronic and degenerate inebriate, while in some cases susceptible to suggestions of criminal acts, lacks reason and steadiness of purpose to carry them out The confused brain is the center of conflicting impressions and rapidly physiologic changes that make it impossible for any fixed line of action to be pursued Each glass of spirits increases the circulation of the blood in the brain for a brief time, then diminishes it The exhilaration and rapid thinking of one period is followed by the depression and slow confused thought of another, and these follow each other so rapidly that it is almost impossible to follow any special line of conduct or carry out any particular idea In certain cases confessions of criminal suggestions are made that are false Crime is committed and the inebriate when sober is unable to explain why he should have acted thus The thought that possibly some one urged him to do the act occurs After a short time this becomes a conviction which increases with each repetition

In one instance an inebriate who had shot his brother was questioned at the station house by a zealous officer, who suggested that he committed the crime under the direction of an enemy of the murdered man He accepted this theory and confessed to an elaborate plot, in which all the details were described minutely On the preliminary trial this story was elaborated, and accepted as true Later, it was proved to be false in every particular The prisoner had not seen the man who suggested the crime for many months, and at the time he was supposed to have instigated the crime was in a distant part of the State

In the second case an inebriate who committed an assault which proved fatal, was told by his wife that she believed it was done at the bidding of a certain companion who had great influence over him He accepted this and asserted it to be true, giving minute details Later, it was ascertained to be false, and without any basis of reality The statements of chronic inebriates of the causes and conditions of crimes which they have committed, are unreliable and untrustworthy unless confirmed by other testimony

The possibility of committing capital crime at the suggestion and bidding of other persons is always open to grave doubts and should never be accepted as a fact unless established by very clear evidence The statements of undue influence and suggestion of crime after the act by the criminal may be equally doubtful and should require the strongest proof before acceptance In civil contracts and wills this question of suggestion is more frequently an issue In wills the point raised is the undue influence of some interested party exercised when the man was intoxicated Here, as in criminal acts, there is a wide range of possibilities and no general or uniform line of conduct which can be predicated The enfeebled brain alternately exalted and depressed, always under a mask, and never able to appreciate its relations to the surroundings will act differently at different times In one case such a man willed his property to his youngest son, and the next day to a daughter, then to the physician In each case he declared he had no other wills and was, no doubt, honest in his convictions It is extremely doubtful if any acts or disposition of property can be relied upon as rational, unless the act in itself is consistent and reasonable and just in its results to all concerned A chronic inebriate disposed of a large property to many persons, and an issue was raised of his intoxication at the time of making the will It was proved that the provisions of the will had been determined and mentioned to many persons long before, and in reality was simply the culmination of previous reason and judgment, that could not have been influenced by the intoxication at the time of signing the will

The chronic inebriate not infrequently exhibits new and distinct personalities of thought and conduct When drinking rapidly he may display emotional delirium of thought and conduct At another time when using spirits regularly in excessive quantities, be very still and reserved, and show caution in conduct and speech In the first period he may be loud and violent in his language but excessively cowardly, and the possibility of committing a capital crime at this time is very slight In the second period the crime may be the sudden impulse of the moment, and never premeditated a moment in advance In some persons, delusions of persecution, open or concealed, may be present and crime may follow as a sequence to this, but only from a rare combination of events In other cases optical and aural delusions are the basic exciting causes In some cases where after long continued intoxication voices are heard, some of which are threatening and insulting, sudden assaults are committed, the real causes of which may be forgotten In a case of this kind a fatal assault was committed which was explained as self-defense at the time The next day all recollection of this had faded away In a second case a fatal assault of a stranger on the street was explained by the criminal inebriate as self-defense The victim came toward him with the most violent language and threats, telling him that he had a concealed knife which he would use and send him to hades In the wild frenzy of fear the act was committed The victim was quietly walking down the street all unconscious when struck down The criminal could not recall the reasons for this act a few hours later

Optical delusions have been noted in some cases where suddenly the appearance of some man on the street would be interpreted as evidence of assault, and in defense the inebriate would attack him Such cases are termed mistaken identity, and are settled as blunders and accidents Some chronic inebriate will suddenly on the street have optical delusions, and conceive that the man who is passing him with his hand raised, is in the act of assaulting him, which he repels instantly, only to discover his mistake which he explains as mistaken identity He may at this moment hear voices and have aural delusions as well as optical delusions, after the act he will have no clear recollection of what has occurred *Many of the criminal acts of this class come from centers of infection*, such as a dog fight, a personal altercation, an accident, some apparent wrong, or injustice, railroad and other strikes, or any occasion in which intense excitement is developed seem to have a powerful influence over the alcoholized brain Crime under these circumstance is fitful, unreasoning and largely accidental, and of an insane transitory type Property is destroyed, assaults are committed and strange unaccountable wrongs are enacted, associated with a degree of frenzy that dies away quickly before any superior force

The chronic inebriate thrown into centers of excitement, drinks freely and is soon narcotized and unfit for any physical or mental activity On recovery from the stupor in centers of similar excitement, he becomes more delirious, and the former delusions are more prominent and new ones added

Practical observation shows that the open saloon near centers of great public excitement is not only dangerous but increases the services of lawlessness and incapacity of all who frequent it, to act rationally Crime committed in such circumstances and surroundings is practically insanity

Sexual crimes by this class will be of the same impulsive unreasoning character The history of the case, and circumstances of the act, will rarely fail to show the delusional and delirious character of the mental operations The sexual impulse in these cases is usually exhausted early in the progress of he case, and passion is a small element in criminal acts Cases who have been excessively immoral, as a ule, have paretic symptoms and are always exhausted and have incipient or pronounced states of dementia Criminal acts lack in reason and premeditation, also ordinary caution and prudence, and when studied point out clearly the degenerate brain of the person any criminal with a history of chronic inebriety, meaning continuous and excessive use of spirits, is a pathologic case and should come under medical are and study at once, before his case is adjudicated r is examined legally What are the physical conditions which have entered into the act, and been nfluential or prominent as causes? It is the answer to this question which will determine what disposition should be made of the criminal

READY-MADE MEDICINES

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Some of the many medical journals, and societies, assuming a censorship in the matter, unauthorized by reason, and mistaking a spirit of obstructiveness for one of conservatism, have been trying in the past and are attempting at present to pronounce a wholesale damnation of ready made medicines, without discrimination, asserting that such preparations are unscientific and unreliable, branding the physician who avails himself of them as too lazy to write a prescription, or too ignorant to know how The physicians are also stigmatized as violators of the Code and irregulars, and are tacitly excommunicated from the body medical, by these self-appointed and self-righteous judges It is too true, 'tis a pity too, that there are in existence many medicines, made up of unknown or unheard of ingredients, claiming to cure every ill that flesh is heir to, and many besides that have a spiritual existence only in the mind of the originator, myths, which he sends forth to dwell in the bodies and terrify the minds of his victims, as spooks and ghouls were supposed to do in ancient times, living on human flesh and preying on immortal souls Of such remedies we can not express too deep an execration or pronounce too severe condemnation We trust that there are few physicians who are so low in morality or so poor in purse as to resort to the use or recommendation of such remedies, and we are sure that all physicians and well educated people will agree with us that the use of patent medicines without a knowledge of their composition, does injury to the health of the people

"Because they may, and in fact sometimes do, contain powerful or poisonous articles unsuspected

"Because they always may be, and often are inert, and become a false reliance to the neglect of other and due measures in the care of health

"Because they are liable to be changed in composition so that any experience of their effects as they are purchased at one time, is not conclusive as to the same named articles purchased at another time

"Because they favor excessive recourse to medication, and thereby increase the resort to physicians, and intensify the demand for the physician to give medicine whether needed or not

"Because it is submitting disease to the treatment of a distant and irresponsible stranger, and hazarding health in an apparent game of chance

'Because they are trusted to act as an antidote in the sense in which no medicine can act

"Because their analyses show the greater part of them to be given with multiplied falsehood, and the patronage of falsehood must be demoralizing both to the mind and to the body"

On the other hand, there is a class of special medicines, the composition of which is known, many of them prepared from the formulas of reputable and eminent physicians of high standing, by large houses or competent individuals, who have attained great skill by long experience Such preparations have a merited place in modern medicine and are to a greater or less extent, employed in the practice of every physician

It would be manifestly absurd to condemn in one sweeping statement, without a hearing and without qualification, all remedies known by a special name or which are superior in purity, elegance of preparation, facility of administration or assimilation, or which are prepared by a well-known house, simply for any one of these reasons mentioned

It is claimed that the use of these remedies is unscientific But why, forsooth? Is it not unscientific and irrational not to use them? Medicine ought to avail itself of every remedy that it can obtain

The Code asserts that it is unbecoming to the profession to keep secret any remedy which is found to be of benefit to mankind But if we are required to give information to our confrères, *pro utilitate hominum* should we not also be willing for the same reason to accept information, or its equivalent, a remedy which will alleviate suffering or cure disease?

The duty of the physician morally, aside from monetary questions, is to alleviate sickness and this he is in honor bound to do, in allegiance to the name he bears, regardless of any code to the contrary If a medicine is in the market which is superior to any that he knows of, he is bound to use it Even the courts of justice say this for a man is supposed to keep abreast of the times and to give his patient the benefit of all the improvements that progress may have introduced

Many of the preparations in that classic book of reference, the Pharmacopœia are merely empirical compounds, some of them centuries old, handed down with the Code, as relics of a by-gone age, moss-covered milestones in the road of progress, which would be more fitting as tombstones of the dead past When we read the list of advantages claimed for some of the officinal drugs, and see what an army of ills each one can slay single-handed, yea, more than the jawbone of the ass, in Samson's hands, we are led to think that the description is nearly as inclusive and sweeping as that of some quack medicines which claim to cure everything without regard to sex, age or nationality

Many special medicines contain but one remedial agent in an agreeable vehicle or combination Others are rational compounds which clinical observation and physiologic experimentation have shown to have a real value in medicine No one can consistently deny but that the value of a given drug is increased with its elegance of administration or perfection of assimilation A cod-liver oil emulsion is certainly tolerated in many cases where the plain oil would be rejected, and we think the physician who would refuse to use one of the many emulsions in the market in such a case would be guilty of contempt of the times and negligence of his duty to mankind The same is true of all elegant preparations, gelatin- and sugar-coated pills, encapsuled powders, cachets, flexible capsules, elixirs, syrups and the like, and in especial of prepared foods, yet such is the obstructiveness of conservatism that at a recent State meeting of physicians all food articles were excluded from the exhibit Such an action was certainly very short-sighted in its policy and derogatory to the good name of the profession as a progressive body Physicians, who all of their lives have laid special stress upon the advantages of a properly regulated regimen in living and eating, and have attempted to discourage the indiscriminate employment of medicine by the profession, and the irrational resort to drugs by the laity as a cure for every ill, are helplessly and involuntarily placed in an anomalous position by such an action which seems to set medication above treatment They seem to say to the young physician, You must give medicine, let nature take care of herself Medicine you must give! Accordingly the advance guard who depend more upon a rational treatment, are cut off from the main body of the rank and file and left without support

We eat to live, but unfortunately some are so constituted that it is very difficult to find anything suitable to eat In wasting diseases, in fevers, where it is all important to keep the spark of life alight until we can subdue the raging disease, or until it wearies itself out and its violence is overcome by sheer exhaustion, in such cases where each drop of nutriment is fuel, like oil for life's flame, we welcome liquid foods, beef extracts and other invalid foods as we would nectar from the gods To the invalid, such foods may serve as a staff to aid him on life's rough road, to help him to ford the river of disease, and perhaps to gain the vantage ground of health beyond In such a case, food is far more valuable than medicine and, in fact, in some cases medicine is injurious

It is said that ready-made medicines are unreliable In truth, many of these are more reliable than those extemporaneously compounded Even the druggist who attempts to dissuade the physician from the use of these articles, avails himself of a certain class in his extemporaneous work Tinctures, syrups, extracts, plasters and the like are sold in large quantities to the druggist, and few at the present day fill their stock bottles with their own preparations, since they can purchase them, of standard and uniform strength, cheaper and better than they can make them extemporaneously In the preparation of these remedies the purest and freshest drugs are employed, as a rule Expensive machinery is needed and the utmost care is taken at every step to retain the activity of the drug Careful assays are made during the progress of manufacture and a standard article is placed on the market

It is asserted that the use of these remedies is a violation of the Code of Ethics It is not! These preparations are not patent or secret and are not vaunted as cure alls They are advertised, legitimately, in medical papers of established character, the proper medium for conveying information to the profession The manufacturers incur great expense to inform the profession still more, by samples and circular letters, and by their agents, all of whom are as a class gentlemanly in their address and unobtrusive in their manner, contrary to the rule of the road that "a drummer is a bummer" Many of these agents are young physicians and are thoroughly entitled to the respect of the physician upon whom they call No man knows so much but that he may know more I am not ashamed to say that I have learned many points of value in talking with such men and have seen some very pretty and striking demonstrations in my office, and yet some men who are ethically gentlemen prove themselves practically boors by their ungentlemanly reception of agents, forgetting that civility costs little and is worth much

Any one who uses ready-made preparations, does so understandingly, the character and quantity of the ingredients is known, the dose of each is regulated and it is as proper to prescribe them as it is any drug in medicine It is unfortunately true that these remedies may be abused Manufacturers may advertise their preparations among the laity and they may thus become household remedies But if they do good and relieve suffering they are in accordance with the Code Then, too, there are many drugs that are household articles such as Jamaica ginger, paregoric and the like, and yet we prescribe them in spite of the fact that they are known to the public Granting that the manufacturer abuses the confidence of the physician, the latter has the remedy in his own hands He alone can regulate his own actions and it is manifestly unjust for any man or clique of men to lay down arbitrary rules for his guidance, to trespass upon his liberty, or to dictate arbitrarily, "this, thou shalt not do"

I am convinced that much of this hue and cry is raised by mercenary druggists, actuated by envy or malice One reason for this is that it is becoming possible for the physician to dispense his own remedies, thus naturally depriving the druggist of a large percentage of profit His cupidity being disappointed, he turns like a snapping dog on the one who opposes him and by blackmail attempts to injure him In former days the physician properly filled his own prescriptions, the druggist was a latter day convenience, but now the physician has become the druggist's convenience The patient comes to a physician and gets a prescription, which he has charged, he takes this to the druggist, who fills it and gets cash, several hundred per cent upon the dollar, in many instances If the druggist is not over-scrupulous, he will not hesitate to fill the prescription an indefinite number of times, by number, for any one who may call, or to recommend the prescription to others, or to put it up as a preparation of his own We once had a patient who begged for a face lotion and we gave her a prescription making a 4 ounce mixture She liked this so well that she had the druggist put up a gallon of it and retailed it to her neighbors and has since established a thriving business In another case, an enterprising druggist, more enterprising than honest, criticised a prescription and the treatment, and sent the patient to another physician who paid the druggist a percentage—and the patient—died These are not imaginary cases but facts, for which I can vouch

Physicians can change all this and easily settle the much disputed point as to the ownership of the prescription by furnishing the patient with his medicine, no prescription being needed The patient is thus better satisfied as he gets something material, a *quid pro quo* for which we will pay much more readily than for a prescription and advice The average mind can not approximate or appraise the value of an opinion, it can set a price on the material substance Hence it happens that the druggist is paid, while the physician may whistle for his fees The one is a business transaction, by a tradesman, the the other an ethical courtesy extended by a professional gentleman, who sets a false dignity upon himself, and his comrades, and who is deterred from setting a just money value upon his services, because forsooth it is derogatory to the dignity of the profession Still a man is thought more of if he *insists* upon his rights and for value given a physician certainly ought to insist upon an equivalent value in return

Aside from the politic aspect, the physician can often alleviate suffering, at once, by having a medicine case handy, greatly to the relief of his patient and to his own reputation Tablets, triturates, and concentrated tinctures and extracts furnish potent remedies, in a portable form, which are of especial value in emergencies and in night service when it would be impossible, or would involve great delay to obtain them from a druggist at a time when a minute saved may mean a life saved The charges made are serious and demand earnest consideration, but they should be conscientiously disposed of and be handled without prejudice We have spoken of the Code We do not want to be considered as opposing the Code It is very good what there is of it, and plenty of it, such as it is It contains incongruities, inconsistencies and contradictions which are not acceptable to a reasoning man It attempts above all to manufacture a gentleman by arbitrary rules, and yet all know that gentlemen are born so and are not made so The profession, individually, need no such Code If a man can not keep the Golden Rule and the eleventh commandment, on principle, he ought to do so from policy The profession do need a rational code of instruction in complicated cases and need it very much The present Code is antiquated, and in many respects obsolete, and to be guided by it is like navigating one of our monster iron steamships with a crude and ancient compass and a roughly drafted primitive chart, both uncorrected and uncertified and sure to run the ship to destruction

The Code tries to cover too much and takes too lofty ground Some consider medicine a science, others an art Some think physics a profession, others a trade No rules can cover all this variety of purposes The business must be governed by business laws which are practical Science, which is essentially built upon theory, until proved by fact, can not be bound by narrow rules but must have latitude to soar and be visionary, to dream and, perhaps waking, find a reality

All of us, as physicians, I am sure honor the first principle of our profession, that to alleviate suffering is of the first importance I am sure we all realize the high morality of our calling and endeavor to advance its highest good, but incidentally the corporal existence must be maintained, for without a body there is no mind So the money question is an important one after all Way down at the bottom of the matter, at the root of the evil, we catch a glitter of gold, and we see the whole of mankind digging for that glittering gold with all their energy Fame is but a name and glory but a story, both may make a good dessert but not a good square meal and neither has a marketable value

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GANGRENOUS INGUINAL HERNIA

HERNIOTOMY INCISION MADE—BROKEN GUT FOUND—LATERAL INTESTINAL ANASTOMOSIS WITH MURPHY BUTTON THROUGH INDEPENDENT LATERAL ABDOMINAL INCISION—SIX MONTHS LATER, AN END TO-END UNION FOR THE CURE OF FECAL FISTULA—RECOVERY

Read before the Chicago Pathological Society Feb 11 1895

BY THOMAS A DAVIS, M D
CHICAGO

Patient a male, white, aged 36 Admitted to the Medical Department of Cook County Hospital on Feb 27, 1894 At the time, the following brief history was written patient has been sick about one week, suffering from severe pain across the lower part of abdomen His bowels have not moved for five days He has suffered from a right inguinal hernia for nineteen years and stopped wearing a truss two weeks ago because of pain in the abdomen which he thought due to the truss, which had been worn with comfort for years previously Has been vomiting for three days (not fecal) and has also had troublesome hiccoughs

Examination chest negative, abdomen rather distended, tympanitic on the left, flat on the right Hernia is reduced No impulse on coughing Patient thinks that the hernia does not come down, when he stands up and coughs

Morphiæ sulph	gr 1-6
Pepsinæ	gr ii
Sodii bicarb	gr iv
Bismuth sub nit	gr v
Pulv Rhei	gr ii

Hot fomentations to abdomen

This was the treatment given from the day of entrance into the hospital February 27, until March 3, when I made an examination of the case with the interne, and concurred in his diagnosis of strangulated hernia The patient was immediately transferred to my care in the surgical ward and prepared for operation The diagnosis was based on the history gotten at the time of the examination that the intestinal obstruction symptoms did not subside after the apparent reduction of the hernia was made, there was tumefaction and tenderness on palpation in the right inguinal region (the seat of the hernia), the temperature was 97 degrees F, with pulse 84 and respirations 24 per minute The patient's features were expressive of great distress

Operation an incision as for herniotomy was made The hernial sac was found to be gangrenous, the gut gangrenous and broken open and fecal extravasation, which had given rise to a phlegmonous inflammation of the surrounding tissues had occurred This seemed to me to be a very unfavorable field for a hernia-laparotomy and equally so for the establishment of an artificial anus, as very little, if any, intestinal contents passed during my inspection of the broken down gut, and if, as I thought, the obstruction was due to inflammatory adhesions, together with still existing primary construction at the inner ring, to break these adhesions down, it seemed to me, would invite a septic peritonitis For these reasons I concluded to make a lateral-intestinal anastomosis with the Murphy button through an independent lateral abdominal incision The abdominal wall was thoroughly cleansed and the herniotomy wound was packed with iodoform gauze A lateral (right) abdominal incision about five inches in length was made, extending to within two inches of the upper end of the primary herniotomy incision When the parietal peritoneum was cut through, a distended, congested, intestinal coil appeared and was traced but a short distance downward when its attachment to the internal ring was found This was the proximal gut A loop of collapsed intestine was drawn up from beneath the distended gut, traced to the same point of adhesion, and was considered to be the distal gut There was no evidence of peritonitis A lateral anastomosis was quickly made with button No 3, and the abdominal wound closed Free fecal circulation was promptly established and patient made an uneventful recovery, so far as general health was concerned Locally, however, the condition were not so favorable The button passed down th proximal portion of the gut, and necessitated extraction nearly two months later

About one month from the time of the remova of the button, fecal discharges ceased from the fistula Patient was now allowed to get out of bed an to be about the ward He grew strong, increased i flesh and felt pretty well, but the fistulous discharg increased and became fecal, and patient was transferred to the suppuration ward and given a bed, th first one from the large outside door where he sai he took a violent cold the first night that he spent i the ward From this time he began to fail A sever cough with free purulent expectoration, loss of appetite and progressive emaciation attending Th offensiveness of the rapidly soaked dressings mad life miserable and the patient urged an operation fo the cure of the fecal fistula This I did on September 10

After curetting the fistulous tract, carefully disinfecting the field of operation and packing end of proximal gut with iodoform gauze, a hernia-laparotomy incision was made, opening into the peritoneal cavity just above the internal ring The adhesions to this gut were but a line in thickness, though quite firm and strong They were severed with the scissors, the intestine drawn down and Murphy's intestinal clamps applied The mesentery was then tied off for two inches from either end and end-to-end approximation, with round button No 3 was made The peritoneal cavity was closed by suture and the external wound was sutured, leaving small space for iodoform gauze drain

The recovery from operation was apparently without incident, excepting that the severe cough caused some intra-abdominal pain and necessitated an extra compress over the field of operation Button was passed per rectum the tenth day The subsequent history is that of progressive emaciation, severe cough, profuse expectoration until death October 23, forty-three days from the last operation

The patient was able to be out of bed for a few days from about twenty days after operation The history of the case from the time of transfer from medical ward March 3 to the time of death could not be found, so that I have been obliged to draw almost wholly upon my memory for this description

NECROPSY

Body quite emaciated Circulatory organs pericardium smooth and shiny and contains about 30 cc straw-colored fluid Heart about the size of owner's fist, soft and flabby, weighs 320 grams, decolorized clot in right ventricle, both ventricles contain clotted blood, tricuspid valves negative, numerous small placques in aorta, all valves competent to water test Pleura adhesions on right side anteriorly, none laterally or posteriorly, few adhesions over left side, there were firm adhesions below to diaphragm Lungs weight together 1700 grams (left 920 grams), right lung, firm inter-lobular adhesions, crepitates and floats, lower lobe, posteriorly is firm, both upper lobes emphysematous along anterior margins, a thin frothy fluid expressed from lower lobe (edematous), small cavity in apex of this, (right lower lobe not described) Left lung-lower part sinks, upper lobe emphysematous, interlobular adhesions, pleura much thickened in places, the whole lower (left) lobe has many cavities, filled with brownish putulent fluid, some of it being thick and cheesy, gray and very offensive No description given of condition of lung around these cavities

Peritoneum smooth and shiny except over region of operation Stomach negative Small intestines a band of adhesions from the parietal wall near the seat of wound of operation, passed downward and attached to ilium about three feet above ileo cecal valve Large intestine negative Liver two thousand grammes, surface smooth, markings distinct, substance firm, lobules indistinct, center depressed and periphery raised, on cut section, pale in color *Gall bladder thirty cc, dark bile*, duct patent Spleen *weighs* 140 *grams, flabby*, capsule smooth, section, soft and pale in color Kidneys embedded in mass of fat, together weigh 400 grams, right, pale on section, pyramids distinct, cortex to the medulla as 2¼ to 1, capsule peels readily, stellate veins marked, vessels in cortex well marked, glomeruli quite distinct Left kidney small cyst on *posterior inferior* extremity, otherwise same as right kidney All other organs examined, *negative* Microscopic, anatomic or bacteriologic examination not made

Post-mortem diagnosis

1 Beginning endarteritis deformans of aorta
2 Localized adhesive pleuritis
3 Right lung edema of lower lobe and small cavity
4 Left lung multiple cavities in lower lobe (abscesses)
5 Parenchymatous degeneration of liver
6 Parenchymatous *degeneration* of spleen

The specimen of intestine which I will exhibit shows perfect union in both lateral and end-to end approximations of bowel The cicatrices are linear and slightly less thick than the normal bowel wall The thickening near the end to-end approximation is due to the puckered four inches of mesentery which was tied off from the intestine resected The lumen of the end-to end union is as large as the button, that of the lateral about one-fifth larger

CONCLUSION

1 That the cause of death was independent of surgical operations

2 That while the statistics so recent, and as yet showing so few cases of intestinal union with the Murphy button, do not place it beyond the pale of a device on trial, yet, if the statistics are referred to at all, we have the same right to make comparison between the different methods of the application of the button In the *Clinical Review*, February, 1895, Dr Murphy reports, in total number of cases up to date, seven cases of lateral anastomosis for benign obstruction with seven recoveries With my case it would be eight cases with eight *recoveries* In the same report he gives, "of the resections for gangrenous hernia, twelve cases with two deaths, a mortality of 16⅔ per cent"

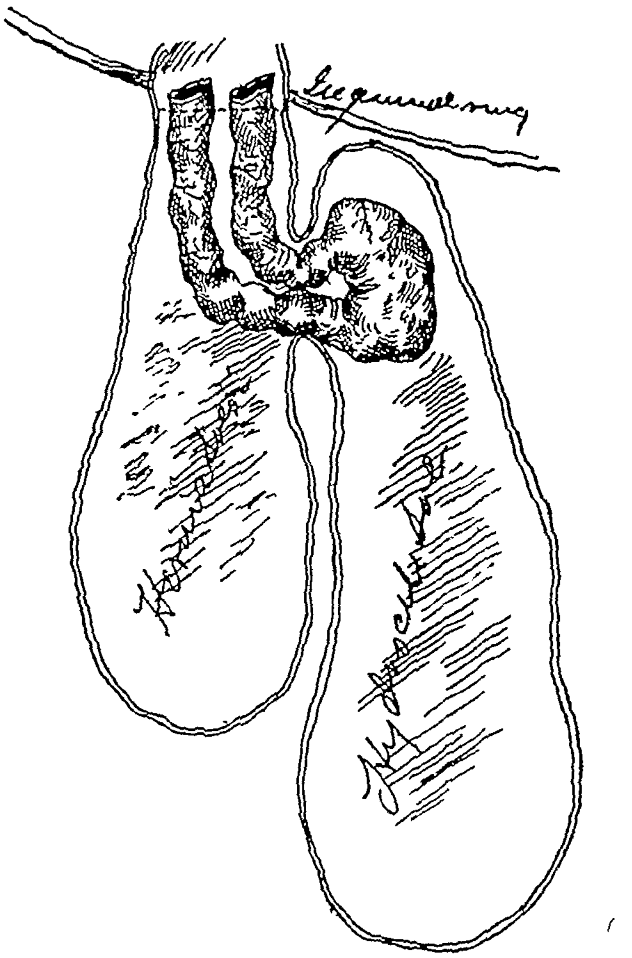
In both of the fatal cases the *gangrenous* gut was broken, and in one an extensive peritoneal infection had occurred prior to the operation

In his conclusions, in *Dictum No 6, Dr Murphy* states that end-to end union should always be performed in gangrenous hernia For the reasons given, and in consideration of experience in my case, I would beg to differ, and would offer a *classification* of gangrenous hernia 1, with unbroken gut which should be treated by end-to-end union, and 2, broken gut which should be treated *by lateral anastomosis*

3 That the restoration of the fecal circulation by means of the Murphy button gives a large union-lumen, with marginal linear cicatrix, and all of the apparent conditions *would seem to insure permanency* and adequate patency

DISCUSSION

DR J B MURPHY—The question raised by Dr Davis as to whether the lateral or *end-to-end operation should be preferred* is certainly one that has two sides to the question, and I can see that there is good ground for taking the position the Doctor has taken In my most recent case, which was somewhat similar to the one reported, there was gangrene of this portion of the bowel as well as the sac, that is, the sac of the congenital hydrocele was entirely gangrenous *and infected*, and *it* has been my belief since, that if I had merely drained the hydrocele sac and made a lateral approximation in the hernia above, I might have saved the patient Still there was a large quantity of fluid and blood in the peritoneal cavity at the time of the operation, and *the case* had gone on for six days with complete *obstruction* Lateral approximation could have been made very readily without opening the sac of the hydrocele The diagnosis of the pathologic condition was not made until I opened the inguinal hernial sac There were two sacs in this case, one hernial, and the other a hydrocele sac, and the patient had a Littre hernia in *the ring of the* hydrocele sac, involving four fifths of the circumference of the bowel The Doctor reduced hernia from the hernial sac and supposed he had completely done so, but examination of *the patient before* operation showed that he evidently had continued obstruction I *believed that it* was because the hernia had been reduced *en masse*, and that the strangulation *continued at the neck* of the sac within, as we frequently find in umbilical hernia, but that was not *the case It was* simply a strangulated Littre hernia that had existed from the beginning in the hydrocele sac, as shown in the illustration



The operation of lateral approximation frequently requires a secondary operation, but not always Dr Joseph Price, of Philadelphia, has operated in one case which did not require a second operation, and there are two or three others who have done the same Another objection to lateral approximation with this method is that the button might appear on the proximal side, that is, instead of falling into the distal portion of the intestine, it will fall into the proximal portion, the distal portion having been contracted before obstruction, but if the precaution be taken on the third or fourth day after the operation, to compress the fistula so as not to permit the escape of the contents of the intestinal canal through, the current will pass out through the opening in the side of the button, and the button will not appear in the fistula but pass on into the intestine I saw an article recently in the *Annals of Surgery*, reporting a case of this kind, in which the doctor stated that on removing the button through the fistula, he tore the adhesions that had formed at the *site of approximation* The report differs very materially from one which I received from the interne who made the autopsy after the death of the patient The interne told me that the intestine was torn loose from the abdominal wall in extracting the button, and not at the seat of approximation The doctor who reported the case must have misunderstood the post-mortem report which he had received or had forgotten it It makes a very great difference in these cases, for it is an unsurgical procedure to extract a button of the size of No 3 through a fistulous opening in the intestine Dr Davis tells us that at the second operation there was but slight adhesion, that the adhesion of the bowel to the abdominal wall was not firm When we are resorting to lateral approximation, one of the precautions to be taken is not to make much traction on the intestine If this is done we will tear it loose from the abdominal wall and leakage will occur

Another difficulty encountered in lateral approximation is that we can not always tell when we have the right coil (Dr Murphy demonstrated the importance of this point by illustrations) With reference to the mortality following end-to-end approximation for strangulated hernia, where we have a gangrenous condition and all the tissues are infected, we must expect it to be large If we have a hernia that has existed for a long time with all the tissues infiltrated, I think the position taken by the Doctor, of resorting to lateral approximation is the proper one, but if we have the gangrenous non-perforative condition, mentioned by the Doctor, I believe the end-to end operation is preferable

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NEPHRECTOMY FOR TUBERCULAR AND SURGICAL KIDNEYS

Read before the Chicago Pathological Society, Feb 11, 1895

BY J B MURPHY, M D
CHICAGO

The following is a clinical history of the cases from which I secured the kidneys I here present for your examination

Case 1—Mrs P , age 32, of Dixon, Ill , came under my observation May, 1888 Had complained for the last three months of pressure and pain on the right side just below the margin of the ribs The pain was of a somewhat intermittent character, at times severe and at times entirely absent, but a sense of increasing pressure on the right side caused the patient to consult a physician Examination of heart and lungs negative, patient emaciated, abdominal walls drawn in On the right side a movable tumor the size of a man's fist could be detected at the position of the right kidney It was somewhat irregular and very sensitive to pressure It moved up and down about one inch with respiration The fingers could not be pressed in above its margin, between it and the liver The urine showed pus in considerable quantity, a few blood corpuscles, and no renal epithelium, specific gravity 1018, quantity in twenty-four hours, forty-one ounces The lower end of the left kidney could be felt between the hands, was not enlarged and was slightly movable The pressure on the side continued during the succeeding week Urination became more frequent and slightly painful Temperature in the evening 101, on an average There was at all times an absence of a history of renal colic Diagnosis pyelonephritis Operation, September 1888, lumbar incision, pelvis exposed, kidney opened and drained, contained pus, but no stone I could not succeed in passing a catheter down the ureter Pus disappeared from the urine for a time, and the patient improved The tumor diminished in size After a time the drainage was dispensed with, but the patient was attacked with chills and fever, and the drain had to be re-inserted Notwithstanding the thorough drainage, every three or four weeks the patient would have an attack of fever During the attack she emaciated rapidly, and the pus in the urine increased in quantity The discharge through the tube was offensive She wore an elastic urinal over the tube About half a pint accumulated in twenty-four hours, consisting of pus and urine This was kept up until October, 1894, six years, when the patient finally consented to have the kidney removed Quantity of urine passed daily through the bladder before operation, thirty-two ounces, containing considerable pus, urination every hour, day and night The patient had a chill the second day before operation, temperature 105, pulse 134 She had become addicted to morphin Operation Oct 19, 1894 A posterior incision around the sinus was made, and liberation of the urinary fistula down to the perirenal adipose tissue effected, then an anterior incision along the right linea semilunaris into the peritoneal cavity Cecum and colon were then displaced to the right An incision five inches long in the posterior peritoneum exposed a large indurated mass extending from the lower margin of the liver to the brim of the pelvis, and from the median line to the spinous process of the ilium The posterior peritoneum was peeled off, drawn forward and sutured to the anterior peritoneal layer, thus shutting off the peritoneal cavity from the field of operation The process of enucleation was then begun, first on the outer side until the fistula was reached and the adhesion separated, then the upper margin separating it from the liver and gall bladder Great difficulty was experienced in removing it from the iliac vessels The tumor was then drawn forward in the wound, the ureter separated and cut off The induration continued beyond, and embraced the abdominal aorta and vena cava Twice I had my finger around them believing they were adhesions A very careful dissection was then made between the margin of the kidney and the vessels on the right side, the renal vessels secured and ligated, remaining adhesions separated and the kidney taken out The ureter was fastened in the lower angle of the wound, the upper angle was packed with gauze, and a small anterior drain of gauze close to the ureter Gauze drains were used, and the ends retained in the wound

It was the most difficult operation I had ever performed, and I am confident if I had endeavored to remove the kidney through the posterior incision, I should have torn either the iliac or abdominal vessels or both

The patient's convalescence was uneventful The morphin was cut off at once, and on the third day the patient jumped out of bed and quarreled with the nurse for morphin Still it had no untoward effect on her The pus has entirely disappeared from the urine The average daily quantity is forty-seven ounces At the time of operation patient weighed 91 pounds, she weighs now 128 pounds

Pathologic condition of kidney the cortex had almost entirely disappeared, here and there a small nodule of secretory tissue remained The mass looked like a thick-walled multilocular cyst, some of the pockets had only small openings accounting for the retention symptoms The ureter was pervious, but its mucosa very much thickened The microscopic appearances will be described by Dr LeCount The gross appearances were those of a pyelitis with retention

Case 2—Mrs C applied to me for treatment June, 1894 She had previously suffered from a pleuritis with effusion, which had disappeared, had enlarged glands of the neck, and a family history of tuberculosis Complained of frequent urination followed by severe pain, quantity of urine passed in twenty-four hours, thirty-four ounces It contained blood, pus, and tubercle bacilli An enlarged, slightly movable nodular kidney could be felt on the right side Examination of bladder, Kelly method, showed a tubercular ulcer around the right ureter and induration of ureter also present Urine from that ureter contained a large quantity of pus, urine from left ureter normal Diagnosis -tuberculosis of the right kidney and ureter, with tubercular ulcer of the bladder Patient was suffering so intensely that it was decided to remove the right kidney and ureter This was done with an incision similar to former case, in the right linea semilunaris The kidney was much enlarged, sacculated, still readily enucleated, vessel ligated, ligatures cut short The ureter was much thickened and removed to below the margin of the pelvis, was ligated, and a strand of gauze brought from the ureter out of the lower angle of the wound, wound closed with posterior and anterior gauze drain, forty-eight hours drainage, removed, with result of complete primary union Patient's bladder symptoms subsided, a very small quantity of pus being found in the urine, she left the hospital three weeks after the operation Two weeks after leaving the hospital the tenesmus set in anew The pus increased in the urine, the bladder symptoms increased rapidly in severity until complete control of the sphincter was lost The position in the wound where the ureter was sewed, reopened Bacilli were present in the urine The patient's condition became worse She died Jan 10, 1895, with symptoms of uremia, dropsy, and tuberculosis of bladder

Pathologic condition of kidney kidney reduced to a tubercular sac, all resemblance to a kidney gone, made very fine sections The cortex was reduced to a granulation tissue sac, caseous inside Here and there, evidences of tubules with regenerated lining cells, only obliterated glomeruli, the so called *fibroid glomeruli* on the outer portion seen The ureter was not so much attacked by the tubercular process The muscular walls were in fair condition The lining was gone and the ureter filled with caseous and necrotic *débris*

The anterior incision made in these cases, I consider of very great importance, as it exposes the field of operation perfectly, and all tissues can be recognized and relations kept well in view The only advantages which a posterior or lumbar incision has over an anterior are 1, the peritoneum is not opened, 2, drainage The method I used, of suturing the posterior parietal peritoneum to the anterior, before extirpating the kidney, practically closes the peritoneum and makes the operation extra peritoneal I believe there is very little more, if any, danger with this method than by the lumbar incision The posterior drainage is very easy to make after the operation is complete The removal of an enlarged and adherent kidney from a fat subject through the lumbar incision is a very difficult and trying operation

DISCUSSION

Dr E R Le Count exhibited the specimens in connection with Dr Murphy's paper, and made the following remarks "The specimen from the first case shows the ordinary condition found in pyelonephritis, and at first I was inclined to think it was tubercular, but on examining the capsule and the trabeculæ which divided off the cavities, I find it is not The condition of the tissue is much more firm than that usually found in tubercular pyelonephritis, although on the whole, there is not a great deal of difference between the kidney in the first case and that from the second one which is a tubercular pyelonephritis There is this difference in the second case, that the formation of connective tissue in the capsule is not as extensive, and the connective tissue trabeculæ which run down toward the pelvis are not as extensive either Within the cavity of the pelvis we notice various sacculations and the dilated calices are lined by well marked necrotic membrane which is visible even at present"

A CASE OF BILIARY OBSTRUCTION BY A CALCULUS, WITH INTERMITTENT PYREXIA

Read before the Chicago Pathological Society, Feb 11, 1895

BY ELIZA H ROOT, M D

CHICAGO

Mrs M, aged 50, married thirteen years, the mother of five children, all healthy, the youngest being 7 years of age She entered the Chicago Hospital for Women and Children Nov 4, 1894 Previous history, the following history was kindly furnished by Dr C D Collins the patient was healthy before marriage, a few months after which she had her first attack of chills and fever Some months later her first child was born, and during the following year she was quite well Then the second attack occurred From then on, she had repeated attacks at irregular intervals and lasting varying lengths of time These attacks were characterized by chill, fever and sweat, followed by great prostration Soon after the birth of her youngest child, an attack occurred after which she never wholly recovered, but has failed in health and suffered from recurrences of the group of symptoms She was habitually constipated, the feces clay-colored During the last three years there has been no albumin found in the urine She was better when upon vegetable diet There is no history of syphilis There was not much pain until recently, when it was severe at times Condition on entering hospital patient was much emaciated, skin and sclerotics deeply yellow Coughs a good deal and suffers from dyspnea Temperature, 99 8 degrees, pulse, 100, respiration, 36 The liver was greatly enlarged, the right lobe extending to the crest of the ileum, the left lobe filling the epigastrium and extending into the left hypochondriac region

The patient was in the hospital one week The urine was acid, specific gravity, 1010, bile stained in color, and contained no albumin The pulse was irregular, ranging from 80 to 120 The temperature was from 99 8 to 101 degrees F The respiration varied from 30 to 36, and there was great dypsnea at times Patient died comatose

AUTOPSY BY DR VIDA A LATHAM

The examination was made twenty-four hours after death, Nov 12, 1894 The salient points were as follows there were firm adhesions over surface of left lung, with calcareous patch on posterior surface The heart weighed 496 grms , and showed simple hypertrophy The pancreas and liver with pylorus end of the stomach were firmly united by adhesions, and together weighed 3,712 grams The pancreas was very firm and showed increased connective tissue The liver was greatly enlarged, a thick yellowish-green fluid oozing from its cut surface Pigmentary deposit was seen in the periphery of the lobules, and there was a marked hyperplasia of Glisson's capsule, even to its finest ramifications The gall bladder contained little fluid, and its walls were very friable A calculus was found in the bile passage at the junction of the cystic and hepatic ducts, the latter being larger than the gall bladder The calculus was two inches in length It was examined chemically by Dr J H Salisbury, and found to consist of cholesterin, the soft exterior being reddish yellow in color, but containing little or no trace of iron Crystals of bilirubin and biliverdin were present in the liver cells, capillaries and bile capillaries The ductus communis choledochus was patent A point of interest was a duct-like connection between the duodenum and fundus of the gall-bladder This is evidently a point where suppuration had occurred and healing had taken place

The kidneys together weighed 400 grms They were both pale with indistinct cortical markings The spleen was enlarged, weighing 432 grms , nodular and firm to the touch, and deep red in color The stomach was small, with thickened patches along the greater curvature There was a decided constriction of the pyloric end at the junction with the upper two thirds of the viscus The peritoneal cavity was filled with a clear yellowish-green fluid There were abundant firm peritoneal adhesions

Bacteriologic and microscopic examination cultures from the liver gave the bacillus coli communis and pyogenic cocci The tissues, hardened and stained in various ways, gave the following, on section under the microscope the spleen showed the changes of chronic passive congestion , the pancreas exhibited a well-marked chronic interstitial inflammation with indistinct parenchymatous cells, the kidneys showed an arterio-sclerosis, with shrunken glomeruli , the tubular epithelium was swollen and desquamated , the capsules were thickened and there were subcortical hemorrhages Blood cells and casts were seen in many tubules These changes were most marked in the left kidney In the liver were seen a commencing cirrhosis and a perihepatitis Bands of fibrous tissue extended in from the surface The liver cells were cloudy, swollen and fatty Some times between distended capillaries were seen biliverdin crystals, granular material, breaking-down blood cells, some polynuclear leucocytes and bacteria, bacilli and streptococci In places the central vein of lobules was obliterated There was a well-marked cell infiltration and hyperplasia of the fibrous tissue The bile ducts were atrophied, as also the portal vein and hepatic artery The iron reaction was tried with negative results

DISCUSSION

Dr J B Murphy—The symptom of pyrexia in connection with lesions of the gall tracts is an exceedingly interesting one, and one concerning which we are not yet enlightened as to the exact cause of the pyrexia We have the pyrexia occurring most frequently where a gall stone has reached the common duct, usually in the ampulla of Vater, and we have all the symptoms of an intermittent fever, with rigors every two, four or seven days, and sometimes even every fourteen days with regularity In the cases in which post-mortem examinations have been made, it has been found that there was always an abrasion as a result of pressure of the stone, and it is my belief that on this account as well as because the ducts in this region are richly supplied with lymphatics, we have a septic manifestation developed The temperatures occurring from impactions higher up are more rare, but not so very much so We have cases of obstruction (from retention) to the cystic duct In many of the cases I have operated upon for gall stones, over 50 per cent were from obstructions in the neck of the gall bladder or cystic duct, never involving the common duct At least 20 per cent of these cases were accompanied by elevation of temperature It is my belief that we either have infection or suppuration occurring in the gall bladder where we have no history that the patient has had either the presence of a stone or disease of the common duct We know that abscesses form in the liver from impactions in the common duct, the infection in these cases must be in the duct Where the retention is in the gall bladder alone, without infection or the presence of pus, the temperature rarely goes above 101 degrees, and where we find the presence of pus in connection with stones and cholecystitis, the temperature, even when the common duct is not involved, is as high as 103 5 I believe these are septic conditions It is somewhat like the temperature we have from the passage of a sound into the male urethra For a time that was considered of neurotic or nervous origin From this condition of the common duct abscess of the liver may follow, that is, you will have multiple infarcts in the liver as a result of impaction in the common duct which adds further to the belief that the pyrexia is of septic origin

Dr Root —The attacks of this patient continued for thirteen years at intervals, and she had these remittent and intermittent fevers She had been under the care of other physicians who had treated her for ague , in the post-mortem there was nothing of the nature of ague shown The peritoneum about the stomach, the liver and the upper part of the intestines were bound down with old and firm adhesions From what I know of the case, I am inclined to agree with Dr Murphy's idea that it was of a septic nature

Dr George H Weaver —In a case of this kind which I reported two years ago in which intermittent pyrexia had occurred in connection with gall stones in the common duct, for twenty-five years in a woman, there was noticed in her case one symptom which I have not heard spoken of or referred to elsewhere Her bowels were constipated continuously, and if they moved freely, within a few hours she would have an attack of colic The only way I can explain this condition is that the gall stones acted as an obstruction to the duct, the bile accumulating behind them in such a quantity that it distended the duct so that the gall stones fell back from the opening, allowing the bile to flow past into the intestines, and the bile entering the intestines in this way acted as a cathartic and caused the bowels to move As the bile flowed from this cavity into the intestine, it allowed the walls of the dilated duct to come in contact with rough calculi, and in that way set up a spasmodic action which brought on the attack of pain The pain was again relived by the accumulation of fluid carrying the walls of the dilated duct away from the calculi This was to me an extremely interesting symptom in connection with the case, and it might be that the fever which followed the attack of pain was due to the absorption of poisonous materials which were present If the surface of the tube was freshly abraded by contracting down upon the rough calculi, this absorption would be favored

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PRE-COLUMBIAN LEPROSY

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NEW YORK

(*Continued from page 754*)

Dr Franz Boas, who has given to the study of American races more time and interest perhaps than any other man living, who has just returned from an investigation of the Indian races of British Columbia, tells me that the Tenachca and Nass River Indians, whose diet consists mainly of small fish, smelts and shell fish (this is the diet which has always been supposed by the common people, and by many doctors, to be the predisposing diet of lepers) are not leprous, but exceedingly syphilitic Locomotor ataxia is almost epidemic among them Dr Gowers, of London, and many of our own specialists assert that locomotor ataxia succeeds syphilis, and that without syphilis there is very little locomotor ataxia This is not my opinion My experience in Japan, during two years of hard work, made it evident to me that in that region where they have lived in close familiarity with syphilis for thirteen hundred years, there never was, and there is not any locomotor ataxia The same gentleman says that I am probably right in stating that locomotor ataxia has no syphilitic origin, for the old people of that tribe have a great deal more of locomotor ataxia than the younger and yet are less syphilitic Besides, other tribes in that region examined by him have not loco motor ataxia at all, and yet have more syphilitic disease than the Tenachca Indians Nor is it my belief, and I have had a great experience of such cases, that locomotor ataxia can be considered as a sequela or attenuated form of leprosy For the disease called locomotor ataxia does not exist in Japan If it was an attenuated form of leprosy, it would be found there Therefore no matter how rampant the disease may be in British Columbia to day, there is no evidence from this fact, that leprosy existed in British Columbia in pre-Columbian days

Whether this syphilis of British Columbia came from East Asia or not, he is unable to say He does not know of leprosy in any American primitive race

Dr Wm F Whitney, Curator of the Warren Anatomical Museum, Harvard Medical School, in an article entitled, "Notes on the Anomalies, Injuries and Diseases of the Bones of the Native Races of North America," published in the 18th and 19th Annual Reports of the Peabody Museum of American Archæology and Ethnology, Cambridge, 1886, mentions among the diseases various exostoses with and without eburnation, and among the hyperostoses the subjects were as a rule persons past middle life He says, moreover, that the flattened heads of the ancient Peruvians show also a large proportion of hyperostosis

Periostitis is manifested by a deposit of new bone of greater or less extent, along the shaft of some of the long bones, especially the tibia (For the evidence necessary to prove that this, as well as other changes, are the results of syphilis, see *Boston Medical and Surgical Journal*, vol CVIII, p 365) The disease known as chronic rheumatic arthritis has also left its marks in roughness and deposits on the edges of the articular surfaces and on the bodies of the vertebræ Under the heading, "Caries," he mentions three remarkable specimens

The first, 17,223, stone grave mound, near Nashville, Tenn, affected the spine and there resulted an extreme case of anterior angular curvature The disease had destroyed almost the whole of the bodies of the lower cervical, or upper dorsal vertebræ, and they had become united in a firm mass The spinal column at this point was bent forward so as almost to touch, there being but a few centimeters distance between what are taken to be the bodies of the fourth cervical and fifth dorsal vertebræ The amount of deformity must have been very great

In this connection it is curious to note that there are in the museum, found in the stone graves of children in Tennessee, little clay images which are faithful representations of persons affected with Potts disease, and that many of the water bottles from the stone graves of Tennessee, and from the mounds of Missouri, represent women with hunchbacks

From the mental acuteness says Dr Whitney, which is so often associated with this malady, it is easy to conceive that such deformed people may have been held in peculiar veneration, or there may have been some superstition in regard to their protective influence At all events this spine furnishes the veritable proof of the existence of persons so afflicted

The second case of caries is found in bones, 27,372, from a stone grave in Brentwood, Tennessee The articulating surfaces of the right femur and tibia forming the knee joint, show marked erosions of the smooth hard layer of bone on which the cartilage rests At first sight, this might be attributed to the results of weathering, but closer inspection reveals the fact that there is a marked increase in the size of the openings for the nutrient vessels for some distance from the joint on either side, and that here and there the shafts are roughened by small pieces of newly formed bone From this the inference is justified that the destruction noted above is the result of a chronic inflammation which in no way differs from the so-called "white swelling" of the knee that is always to be found in the surgical wards of any large hospital

In the third case, 11,891, stone grave mound, Nashville, Tenn, it is the ankle joint that is implicated The opposing surfaces of the left tibia and astragalus are entirely honeycombed by deep depressions, separated by irregularly shaped bony trabeculæ with rounded or roughened edges In the lower part of the tibia is seen a cavity communicating with the external surface by a small canal opening through the inner malleolus Lying free in the cavity is a piece of dead bone, too large to pass through the hole

These cases are interesting from the fact that such processes are now supposed to be the result of a local tuberculosis, and if this existed it is fair to assume that the internal organs must have suffered also from tuberculosis, the most common seat of which is in the lungs in some form of pulmonary consumption This assumption is verified by one of the early writers on the habits and life of the Indians, who says of them "*C'est peut etre du meme principe et de ce qu'ils ont toujours l'estoma et la poitrine decouverte, qu'ils contractent une espece de phthisie, qui les minant peu à peu en conduit la plus grande partie au Tombeau et à laquelle ils n'ont pu encore trouver du remede*" (Lafitau, vol II, p 360, Paris, 1724)—*Translation*. (It is perhaps for the same cause and from the fact that they have always the stomach and chest uncovered that they contract a kind of phthisis which, wearing them out, little by little, brings most of them to the grave, and for which they have not as yet been able to find a remedy.)

There remain to note a few skulls which have cicatrices pointing to more or less extensive inflammation, the cause of which is still obscure

The skull of a female of middle life, 18,264, from a stone-grave mound on the Little Harpeth River, Tennessee, has a number of slight cicatrized depressions, more or less distinctly connecting, passing completely round the head on the line of the forehead Their form is chiefly linear, but in one or two places they cover spots as large as a finger nail The parietal protuberances and frontal bone show the most extensive marks, and from the latter it passes down over the bridge of the nose The right lachrymal canal is filled by a new and symmetrical growth of bone almost occluding it

Tuberculation of face, from Dr Morrow's collection of photographs

Another skull presenting somewhat similar cicatrices, is 733, from a mound in Kentucky, in the Army Medical Museum at Washington The whole surface of the parietal, frontal and occipital bones is covered by shallow cicatrices having a firm base, and near which are minute perforations through the intact outer table into the diploe Some of these depressions look as if they had been made by placing a finger on the softened bone, while others are slightly star-shaped or else are linear and anastomose, surrounding islands of unaffected bone

The general and extensive changes of these two skulls can be explained best by the assumption of a syphilitic affection But the appearances are not quite characteristic There is wanting the peculiar ivory-like luster to the healed spots, and the accompanying sclerosis of the bone in general

In No 20,180, an imperfect calvarium from Stanley Mound, St Francis River, are a number of very slightly depressed and radiating cicatrices situated chiefly on the frontal bone The grooves for the arteries are very deep on the inside, but the bone is not in general sclerosed

The maxillary bones are of interest and it is a pity that the bones of the face are in such a fragmentary condition that the exact extent of the lesions can not be satisfactorily made out In the right antrum of Highmore, the posterior wall is thickened and the superior is covered with spicular exostoses, while a large linear one reaches from near the opening across the bottom The whole inner surface of the bone is rough, and to it the lower part of the palate bone is intimately blended Only a narrow strip of the hard palate is left and it is difficult to decide how much of the loss must be attributed to post-mortem action But just in a line with the lachrymal canal is a rounded and roughened edge, which must have formed part of a perforation into the mouth that existed during life A fragment of the right side of the "sella Turcica," with an attached bit of the great wing of the sphenoid and pterygoid plates shows marks of roughening similar to that on the maxilla and palate bones, as if an inflammation had extended upward from this point The edge of the anterior nares seems more rounded and deeper than normal

From Dr Morrow's collection of photographs

There is less remaining of the left maxilla than of the right, but the same roughness of the internal surface is seen, and this has extended forward, partially filling up the edge of the anterior nares on this side The socket of the first molar, which lies directly beneath, has evidently been the seat of an abscess, and it is possible that this stands in a causal relation to the changes seen on the bones bounding the nasal fossæ *It would be difficult, however, to bring* this into relation with the cicatrices on the forehead

At the Army Medical Museum in Washington are the bones of the face, with the frontal bone attached, (748) from a mound in Kentucky, showing the probable effects of a large tumor This had completely filled up the nasal fossæ and had rounded off the edges of the nasal and maxillary bones forming the boundaries of the anterior nares The septum of the nose and turbinated bones have entirely disappeared and the ethmoidal cells were freely opened Through the hard palate there is an oval opening extending from just behind the alveolar process through the entire length of the hard palate, leaving a narrow strip of bone on each side The edges of this opening are rounded off similarly to those of the nose Possibly there may have been a congenital cleft palate into the opening of which the new growth extended

From these facts we conclude that there exist evidences of tuberculosis and syphilis in the remains of the ancient races, but no evidences of leprosy And we further may conclude that some ancient races of America buried images, representing the diseases with which they were afflicted We have good reasons, at any rate, to believe that the ancient Peruvians intended to represent on their *huacos* pottery, if a disease at all was represented, one which we have good reasons to believe was considered by them as aristocratic and sacred

Dr Emil Schmidt, in answer to my inquiries as to evidences of leprosy in Peruvian antiquities known to him, says "As to your questions about pre Columbian leprosy in America, I looked once more over my collection of Peruvian skulls and mummies (more than eighty specimens), but with quite negative results I do not remember to have found any evidence of pre Columbian leprosy in other collections examined before We have here, in the Leipziger Museum fur Volkerkunde, a valuable collection of old Peruvian pottery, unfortunately, it is packed up in the museum, being transferred in another building A few years ago I examined this collection rather closely, and I am sure I should not have overlooked them, if there were any unmistakable indications of leprosy "

I have addressed the following inquiry to Dr Augustus Le Plongeon "I can not see any positive facts showing that leprosy existed on this continent before the arrival of the Spaniards, except the possibility produced by the great intercourse with Hindostan, Indo China and Burmah, to which you seem to attach much importance, and those *huacos* potteries, on which Dr Muniz thinks he found leprous representations Have you ever seen any indications on any of the works of art of Yucatan of any representations which you might consider as relating to leprosy? Have you ever seen any representation of mutilated hands or feet? Did you ever see any corpses with such mutilated hands or feet? Upon what do you base your belief in the existence of leprosy in Yucatan, before Columbus, beside the intercourse of that land with leprous countries?"

The following is his reply "As I have told you in my former letter, I have not investigated in my studies if a particular kind of disease existed on this western continent before the arrival of the Spaniards, but I regard it as probable, in view of the communications that certainly existed between its inhabitants and those of all other countries, that diseases existing in said countries were propagated among them, as they are to day Leprosy no doubt existed, since they had a word to designate it, and their relations with Southern India were quite frequent In my book soon to appear, "Queen Moo and the Egyptian Sphinx," you will see the nature of their relations The ceramics of the Mayas, at least the pieces I have seen, were ornamental, of a very different character from the Peruvian, on them were never, as far as I know, represented any of nature's deformities The Maya ethics were of a more refined nature than those of the Peruvians No representation on them recalls any infirmity to which the human body is subject Their paintings and sculptures portray battle scenes, domestic life, religious and other rites and ceremonies, historical events, etc

"I repeat, I do not know that leprosy existed among the Mayas in pre-Columbian times I suppose it did, because they had a name for it, *Naycam*, which would not happen unless they had some knowledge of the disease "

Here we see that Dr Le Plongeon has two foundations for his assertion that leprosy existed here before the Conquest first, the probability of its having been introduced by the various relations of the country with Southern India, then the traditional name for it, which was *Naycam*, from the word *Nay*, to eat away, or rot As to the first, we may say, it does not hold water New York has a thousand times more communication with all parts of the world than Yucatan had with India, and yet it is not a leprous city As to the second argument, Dr Gustave Bruhl has shown in his studies on pre Columbian syphilis in America, that the Mexicans and the Mayas, and also the Quechuas and Aymaras, of Peru, had names for syphilis before the Spaniards came He argues that diseases introduced by the Conquerors were designated by the Naturals, as a rule, by some reference to the characteristic symptom, and that therefore syphilis especially was of pre Columbian origin, as its name was *not* so designated by the Mexicans, Mayas, Quechuas and Aymaras Now the name *Naycam*, which means an eating away, rotting, would have to be considered as the name of a disease introduced by the Spaniards, and beside it might be applied as naturally to lupus and syphilis as to leprosy

I addressed also a letter to Mr Clarence B Moore, whose archæological work in Florida is so well known and appreciated The following is his reply

"My mound work has been almost entirely confined to Florida, where I have opened about one hundred and twenty-five mounds, nearly all of which I have totally demolished My experience, then, relates only to Florida

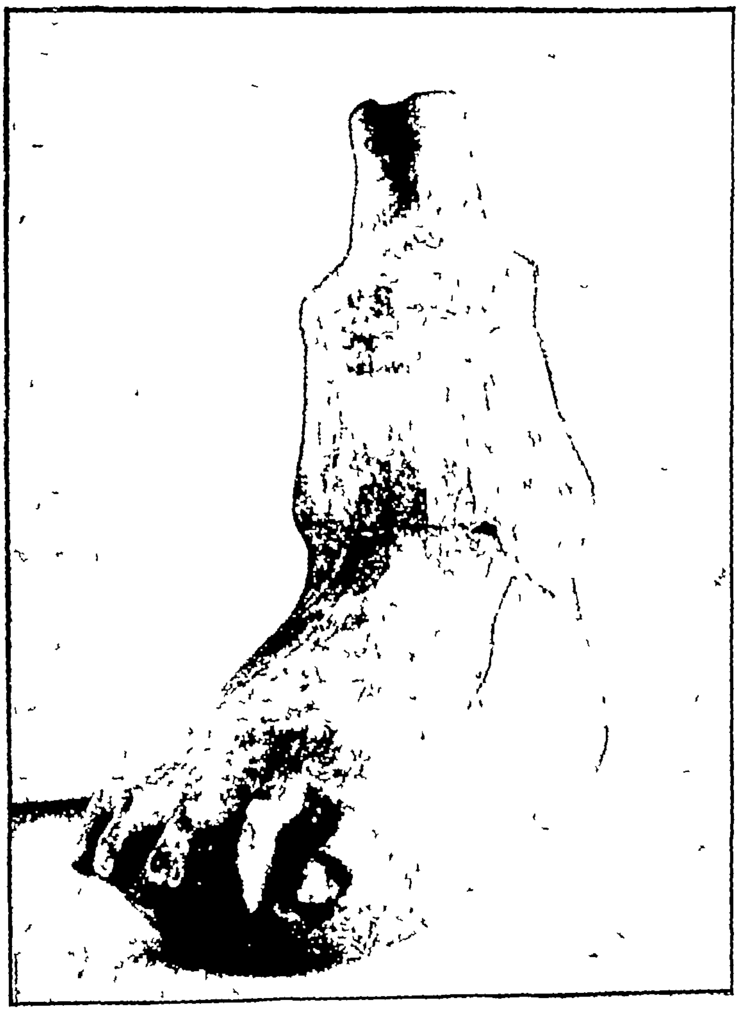
"I have found a considerable number of pathologic specimens during my five years of exploration In referring to these specimens I shall exclude all cases of fracture, as I take it you are especially interested in diseased conditions of the bones

"I have never seen any atrophy of the finger bones, such as was indicated in your photograph, but it must be remembered that in nearly all the Florida mounds the form of burial is of the bunched variety, *i e*, skeletal remains of bodies previously exposed until the flesh had left the bones were buried in little piles, or scattered throughout the mound In these interments the long bones and crania figured principally Bones of the hands and of the feet, the vertebræ, etc, are seldom met with Nevertheless, in some of the largest mounds, burials in anatomical order were found

"The question which principally interests archæologists is as to the occurrence of syphilis in pre-Columbian times Dr Joseph Jones in his 'Antiquities of Tennessee,' published by the Smithsonian, writes at considerable length to prove the existence of this disease among the men who made the stone graves and as these sepulchres are, I think, admitted by all to be pre-Columbian, he virtually argues in favor of the existence of syphilis among the aborigines previous to the coming of the whites

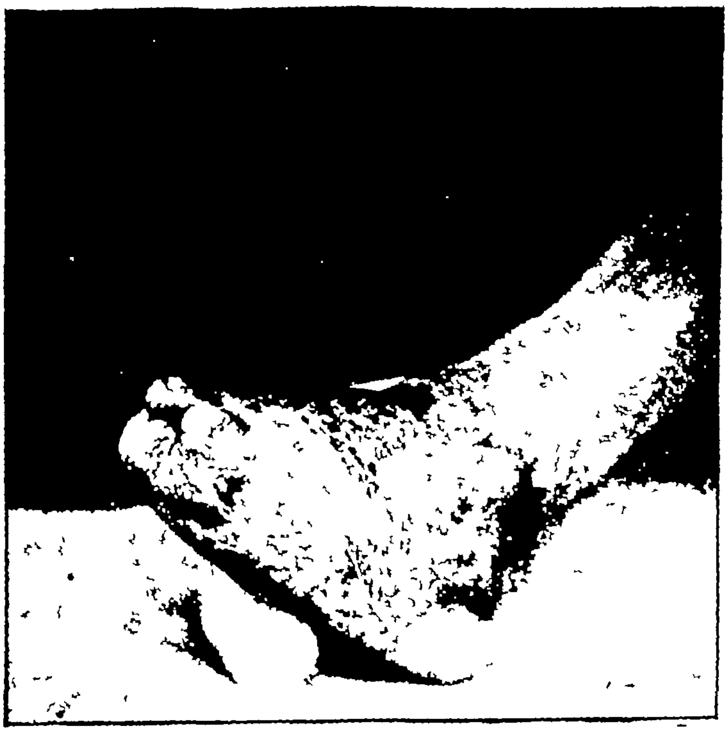
"Dr Jones wrote some time ago, and it has been shown that the specimens from which he drew his conclusions did not show positively the ravages of syphilis, but might have presented the same appearance through changes arising from other causes

'Dr Hyde, *American Journal of Medical Sciences*, 1891, has treated in an interesting and sensible way the occurrence of this blood disorder, under the heading, (I think) 'Pre Columbian Syphilis' Dr Hyde arrives at the conclusion, as I remember the paper, that it would be absolutely necessary to show they were unmistakably syphilitic bones encountered in the mounds, that these mounds were of unquestionably pre-Columbian origin To this I might add (I do not recall whether Dr Hyde refers to it) that in mounds of great age are often found intrusive, or secondary burials Within the past week I have exhumed a body with remnants of clothing and teathers belonging to a pillow Later Indians, as for instance the Seminoles, who were doubtless infected, may have been buried in mounds, while to my knowledge negroes and whites have been buried in ancient tumuli These burials, however, are never over three feet below the surface and by careful observation as to depth all chance of basing conclusions on late burials may be excluded



Huacos pottery, evidently an amputated foot Wine or water bottle, exhumed with Peruvian mummy, said to be pre Columbian Bandelier collection, American Museum of Natural History

"The question of pre- and post Columbian mounds is warmly debated by archæologists The Smithsonian, all of whose work is done by agents while conclusions are drawn at desks one thousand miles away, believes in the existence of many post-Columbian mounds of importance On the other hand *all* independent field-workers such as Professor Putnam, Cushing, Moorehead, Fowke, Thurston, of Tennessee, and, in an humble way, myself, have yet to find any thing in a mound of importance, much below, the surface, which in any way indicates contact with the whites I am not speaking now of Florida, but of the entire country Articles distinctly European are glass, glazed earthenware, iron, lead, pewter, brass, bronze, etc , etc The Smithsonian has maintained that the copper of the mounds must be largely European and the mounds consequently of a late date A recent writer, however, has pointed out that it is untenable to suppose that aborigines having intercourse with Europeans and obtaining copper from them should bury this copper, with a great variety of objects *all* distinctly aboriginal, and has, moreover, by a cloud of analyses shown that the copper of the mounds is pure native metallic copper, to which the aborigines had access and which is highly malleable and that this mound copper has nothing in common with the products of the imperfect smelting processes of the highly arsenical European sulphides, used during the fifteenth, sixteenth and seventeenth centuries



Mutilated foot of leper, two toes remaining From Dr Morrow's collection of photographs of leprous deformations

"In Florida, in mounds of considerable size, a number of feet below the surface, beneath undisturbed strata, associated with objects of aboriginal art only, I have found a considerable number of long bones which had suffered from periostitis and osteitis of both the rarefying and condensing forms, as shown by general enlargement of the bone with irregularities of the surface, local nodular swellings, roughening and spiculation of the surface, etc None of these bones have been submitted to thorough examination by experts, and it is therefore impossible to say positively whether any show the marks of venereal trouble

"At the present time, both archæologists and physicians are inclined to attach little credence to the existence of pre Columbian syphilis

"Most of my specimens are at the Academy of Natural Sciences, 19th and Race Streets, Philadelphia, where Dr Dixon, the Curator, would doubtless be happy to have you examine them I have written at considerable length as I have always maintained that the opinion of any one is valueless unless it is based upon substantial facts"

Dr Prince A Morrow, ex President of the American Dermatological Association, who examined personally and very carefully the lepers of Molokai, Sandwich Islands, and who is, I believe, the highest authority on leprosy in this country, does not remember seeing a leper who had lost his upper lip, nor does he think that such a loss is a leprous manifestation He thinks, as I do, that if the authors of those *huacos* potteries had intended to represent leprous phenomena, we should find in their work mutilated fingers and toes In the American Museum there is a *huacos* pot[1], a wine bottle in the shape of a naturally sized foot, with circular flap removed from the top of the bottle, the bone representing the top of the bottle The foot is represented swollen, with toes placed on the end in a peculiar way, but with nails showing naturally Evidently some disease is meant which required amputation Dr Morrow kindly allows me the use of one of his photographs that of a leper foot (not requiring amputation, however) You will find side by side here the photographs of the bottle and that of Dr Morrow, the latter belonging to a Sandwich Island leper The only difference is, as will be seen, the presence of every toe on the bottle, while the photographed leper foot shows but two toes remaining This lack of mutilation and the amputation show to me that it was not leprosy which the potter wanted to represent

(*To be continued*)

SOCIETY PROCEEDINGS

American Electro-Therapeutic Association

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept 25, 26, and 27, 1894.

William J Herdman, M D, President

(*Continued from page 726*)

Dr Robert Newman, of New York, read a paper on

SUPPLEMENTARY REPORT ON THE SUCCESS OF ELECTROLYSIS IN THE TREATMENT OF URETHRAL STRICTURES

Up to date, electrolysis in the treatment of urethral strictures has been successful in the same manner as practiced by me for over a quarter of a century and reported last in the Journal of the American Medical Association, April 15, 1893

Therefore, I have nothing to retract but only to confirm former statements In addition, I published in the *Times and Register*, Jan 21 1893 the statistics of one hundred successful cases treated by Dr F S Crossfield, of Hartford, who wrote the following 'I have practiced electrolysis for the treatment of stricture of the urethra upward of eight years with success My synopsis of one hundred cases and observations coincides with the published statistics of Dr Robert Newman, of New York My cases were all seen in private practice Those reported were not selected cases but taken in order of occurrence taking the cases as a whole, together with those of Dr Newman, it establishes the practical value of the method"

In the same number of the *Times and Register* appeared separate reports of successes of electrolysis in urethral strictures by Drs W H Walling, F H Wallace, Wm F Hutchinson Wm R D Blackwood, J B Greene, Chas G Cannaday, O S Phelps and R G Nunn

More communications have been received by Dr E L Stephens Fort Worth Texas, Wallace of Boston, and Dr A R B Booth, of Shreveport, La, who reports one hundred cases with a complete cure of 80 per cent

The theory of electrolysis is based on sound scientific principles, it causes a galvano chemic absorption of the stricture, through the mucous and submucous tissues, by the direct action of the negative pole with weak currents of from 3 to 5 milliampères

Practical experiments have demonstrated the electrolytic action beyond a doubt The theory has been practically applied with good results in thousands of authentic cases

In the *Times and Register* of Philadelphia, of April 8, 1893, I reported a compilation of 1,755 successful cases by 54 different operators, all of whom vouch for the correctness of their statistics, which proves that the electrolysis under consideration is widely practiced

The same number of the *Times and Register* brings additional successful cases by Drs G Howard McFadden, F H Wallace W R D Blackwood, C A Bryce, and from the following editorial is quoted "The statistics accumulated by Dr Newman if all were reported, would cover a list of over 2,000 cases of urethral stricture treated by the electric method In the face of such a mass of positive evidence, one is tempted to explain the dissent existing by the application of the personal equation Still, every one has his right of opinion and free expression, and if the opponents of this method desire it, the columns of the *Times and Register* are equally at their service"

Dr F B Bishop, of Washington, D C has reported more successful cases in the *Virginia Medical Monthly*, June, 1893, in which he says "After a constant experience of eight years, I am thoroughly convinced that the treatment of the urethra by electrolysis is the best method now known to the profession"

In another part of that article Dr Bishop says "Dr Newman, of New York, has used this method about twenty-six years, and during that time according to his statement, he has treated numbers of cases with uniform success Leading surgeons throughout the country have been severe in their criticisms of the Newman method, and have cast a shadow of doubt upon the claims of Dr Newman On the other hand, he has been supported by many men of prominent standing in the profession, both in this country and in Europe, who have taken the trouble to master the method, and have practiced it successfully Some of the critics, I think, have been rather unfair to Newman, inasmuch as they are hardly inclined to give him credit even for sincerity in the report of his cases cured, but content themselves with a wholesale condemnation of his method because they have tried it a short time and failed to cure their cases"

This most candid statement of Dr Bishop only proves that some of my critics are unjust in doubting statistics without having any proof to the contrary My statistics are given in good faith, most of them based on documentary evidence, which consists of publications in medical journals by well-known authors and of original letters in my possession, as well as the evidence of patients, and concurrent opinion of their family physician, either by witnessing the operation or examining the patients before and after the operation, by the final results, no relapses having occurred after patients have been discharged as cured Some patients have been under observation and re examinations for eleven years

Some of these documents are here for inspection, and one particularly will be of interest to show what means have been used to mystify facts

Permit the introduction here in brief of only one fact Dr K, the staff editor of *Genito Urinary Surgery*, in the annals of the *Universal Medical Science* for 1890, vol III Sec E, pages 15 and 16 tried to make believe that a Dr Sanders, whose letter I had published, did not exist or was incorrect That letter was written and published in 1885 With apparent design, after the death of this physician and a lapse of about four years from the date of the letter, Dr K wrote a

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[1] Bandelier collection

"polite note" (as he styled it) to that physician This note, as could be expected, was as politely returned by the postmaster, who evidently declined to assume the responsibility of forwarding it to its destination, and the critical investigator closed his report with the triumphal words "If the testimony of all the letters in support of electrolysis is no more accurate than that furnished by the letter of F F Sanders, it is poor indeed The inference is obvious, etc"

Now, Mr President, in answer to this editorial mystification, I am pleased to produce here the original letter of Dr Sanders, attached to a sworn affidavit acknowledging its genuineness and Dr Sanders' handwriting That affidavit is subscribed by a notary public, and the latter's standing as such and his signature is certified by the county clerk, who has affixed his official seal Next I produce here a letter from the sister of the deceased, who also acknowledges Dr Sanders' writing and recollects the case he cited And last, here is a letter from the Secretary of the Medical Society of Morris County, N J, saying, that Dr Sanders was well known in Morris County, had been one of the founders of the said Society and in 1885 was elected an honorary member Now what was Dr K's motive? Is the inference obvious?

All the letters quoted as original are now in my possession as documentiary evidence, as well as other evidental matters, but it is impossible to show the same to every member of the medical profession, neither can I have every one certified to by notary publics and county clerks Therefore I was pleased that the matter has been settled by a committee of this Association, which was appointed to investigate my statistics This committee have pursued their investigations for nearly a whole year, very carefully and impartially examined the documentary evidence, read the letters concerning it, corresponded with former patients and their physicians in America and Europe The final report in the transactions of the American Electro-Therapeutic Association for 1893, page 40, was verbatim "We have examined the records of Dr Newman's cases and regard his conclusions as well sustained by the statistics, and as far as our experience in this line of work adds further testimony, it is confirmatory of the value of the *continuous currents in* resolving a large class of urethral strictures, etc"

This report is signed by Drs A H Goelet, Wm J Morton and W J Herdman That under some circumstances some medical critics throw doubt on the correctness of the statistics, appears almost as a willful libel

To succeed with electrolysis in urethral strictures the operator must be a good physico- and physiologic electrician as well as a genito urinary surgeon Operators using old methods naturally can not be successful If some do not succeed with electrolysis, that proves nothing else than the individual failure, which may be due to the operator, false diagnosis, to faulty instruments, and such failures or negative results do not invalidate the records of successes, all perhaps due to ignorance The old methods in genito urinary surgery are too severe, and it is to be hoped that the future handling of these cases will be more gentle, with less blood pools, less pain, and less or no cutting

The principal points in managing urethral stricture are a correct diagnosis, gentle handling causing no pain, and for the operation of electrolysis, a galvanic battery, good electrodes, the negative electrode used to the stricture, weak currents, long intervals, using only one instrument at a séance, and never to operate while the parts are in a state of acute inflammation

I can not approve nor adopt some alterations of my method which some electro therapeutists have proposed, which consist of stronger current, different pole to the stricture, frequent séances and severe measures

Some have reported good results from faradic currents My experience is, that the faradism rightly applied may act as an anesthesia and relieve spasm, but it never had any action to absorb or cure a stricture of the urethra

If operators follow this advice we will hear of less failures, and electrolysis as a chemic action is a fact which can not be denied Therefore, electrolysis must be a success

DISCUSSION

Dr Beaver said that he had used the conical bougie and also the steel sound He had invariably found on questioning the patient carefully that the current was felt at the spot where the sound entered the stricture He had been unable to see why there should be any difference in the physiologic effect between the conical bougie and the steel sound, and indeed his experiments had led him to believe that he had obtained cures even more rapidly by the use of the steel sound than by the instrument recommended by Dr Newman

On motion of Dr Walker, the courtesies of the floor w
extended to Dr Frank W Ross, of Elmira, N Y Dr R
said that for eight years he had employed electrolysis
urethral stricture and with success His attention had be
first called to it by a paper read by Dr Newman before
New York State Medical Association In the first case, one
acute stricture, he had succeeded with the static current
obtaining relaxation of the stricture and evacuation of
bladder, although he had been unable to pass the small
catheter into the bladder before this Since then he
employed Dr Newman's method of treating urethral st
ture by the galvanic current He thought the medical p
fession were well aware of the success of this method,
that many physicians were using it He had tried both
conical bougie and the steel sound and had been more t
pleased with the results obtained with both In conju
tion with Dr Squire, of Elmira, he had treated a num
with the steel sound, and he believed the results were b
ter than those obtained by the use of the olive-pointed
strument The reason appeared to be that all neoplas
offered less resistance to the passage of the current and
tissue was readily absorbed He also believed a cure
tained by electrolysis was a physiologic cure, while the c
by cutting was not physiologic He felt positive that
steel sound could be used, although Dr Newman objec
not only to the cure of stricture of the urethra by t
means, but to curing them so rapidly

Dr F B Bishop, of Washington, D C, said that
thought that Dr Newman had conferred the greatest bl
ing on humanity by his method for the cure of ureth
stricture He had employed the method for about ten ye
and was well aware that it required experience in the
of electricity as well as in the manipulation of instrume
in the urethra Much care was necessary to avoid caus
irritation and spasm, and great caution should be exerc
to avoid employing too strong a current At first he
met with numerous failures, but within the last two ye
he had been pleased to have those same individuals ret
to him and be cured He had never used the steel sou
for it had not seemed to him that there would be a pro
concentration of the current on account of the large amo
of surface exposed in the urethra

Dr Wallace, of Boston, said that he wished to say a w
in corroboration of what Dr Newman had said He
been using this treatment for the last five years, and co
not recall any cases in which he had had better success
had not used the sound at all The only difficulty he
found was in cases where it was impossible to get any e
trode through the stricture In cases of stricture of cresce
form, he had found it advantageous to allow electrolysis
take place on the *withdrawal* of the electrode He
treated some cases in which there was still quite a little
flammation present Using a current of about 1 milliamp
he had found that a few treatments would relieve the irr
tion and enable him to pursue the treatment more vig
ously in the course of a few days Within the past year
had treated a patient who had been previously treated
urethrotomy twice Only a No 7, French, could pass at first, but as a result of electrolysis he was now able to pass a No 27, French, there was no perceptible sclerosis and he was able to control urination, which he had not been able to do when the treatment by electrolysis was begun

Dr Beaver said that the statement which he had made about the use of the sound was not theory but was based upon facts given by the patients, and any one present could verify them They had all, without exception, stated that the sensation produced by the current was felt *at the location of the stricture*

The President said that the physical facts would be rather against the localization of the current in that way One could not always place much reliance on the statement of patients, especially as regards localizing sensations, and it would seem strange if the current should concentrate itself at the stricture when a large surface of electrode was exposed

Dr Ross remarked that it had been demonstrated very clearly that all neoplasms offered such resistance that the current was concentrated in their locality

Dr Dickson said that in cases of goitre, if the edges of the clay pad pressed more firmly than the rest of the electrode, a greater effect would be produced by the current at that point This might possibly explain the patient's localizing the sensation at the seat of stricture Where there was the closest apposition there would be the greatest concentration of the current

Dr Beaver said it had often been his experience that one edge of an electrode could press more firmly than the rest, and so cause blistering Although he had treated cases in which the strictures had occupied very variable positions, the sensation had always been localized by the patient as stated

Dr Newman, in closing the discussion, said that a stricture was a pathologic condition, and if a sound were introduced into the urethra and through the stricture, the pressure that it made against the stricture would be sufficient to explain the fact of the patient localizing the sensation there One of the speakers had admitted that this method placed in our hands the means of curing by rapid dilatation—this was just what he did not want The electrical current would be diffused over the whole surface of the ordinary sound instead of being concentrated at the seat of the stricture What we desire is an electrolytic and absorbent action With the instrument he devised and employed, the current was not only applied to the stricture, just where it was wanted, but he was able to feel the exact position of the instrument, and without making pressure could ascertain when the current had sufficiently dilated the stricture to admit of the further passage of the instrument It was this that he desired, it was mechanical pressure that he wished to avoid The conical sound would pass through and beyond the stricture, and electrolysis would be exerted beyond the stricture and not simply at the stricture

Dr. R J Nunn, of Savannah, Ga, read a paper on

BEHAVIOR OF CANCER UNDER MILD GALVANIC CURRENTS

It is undoubtedly a fact that benign tumors can be absorbed to a greater or less extent through the influence of galvanic currents, although the manner in which the absorption is brought about is still debatable ground among electro-therapeutists, but observations on the action of mild galvanic currents upon malignant tumors are sufficiently rare to induce me to place before the Association the narrative of the following case

The patient a lady of 60 years of age, had had a tumor in the left mamma for about five years before she came under my care Upon examination, a nodular tumor measuring about two and a half inches horizontally by about two inches vertically was found in the outer side of the left breast The axillary glands of the left side were enlarged and those of the right side were likewise implicated The tumor had increased in size very rapidly within the last few months, certainly doubling its size within the last two or three The patient was cachectic and her general appearance conveyed the impression of grave constitutional disturbances The kidneys were not involved It was quite evident that in such a case any course of treatment which would deplete the system or subject the patient to shock was utterly out of the question, and hence surgical interference of any kind, whether by the knife, electric or other cautery, was decided to be inadmissible Under these circumstances it was determined to try the effects of mild percutaneous galvanic currents applied frequently and in as large quantity as possible

A sheet-lead electrode with a lint pad extending about an inch in all directions beyond the tumor was prepared, to be used for the negative pole, while a foot bath for the feet and a lint covered lead electrode for the hands served as positive Thus arranged, such a current as the patient could bear, varying from 50 to 100 milliampères, was passed daily The negative was also applied by the hand electrode to the axillary glands, the whole treatment occupying less than half an hour Daily for some months this treatment was kept up, and there was then a marked improvement, the axillary glands had almost disappeared and the mammary tumor had not increased in size one particle, it had lost much of its nodular character and the edges instead of being hard and sharply defined were now softened and shaded off into the sound tissue around But unfortunately my patient could not estimate the progress of the case as did her doctor, and in an evil hour yielding to the glittering promises of a "faith curist," discontinued her galvanic treatment Again five months, during which the ‘faith curist" got in her fatal work of inaction and the case returned to me Now mark the change, the tumor (2½ x 2 inches) which had rather diminished and changed in character by five months of galvanic treatment, had now increased to the enormous dimensions of 13 x 9 inches, with an ulcerated surface in the center exceeding in size the original tumor, the left axillary glands were greatly swollen and the whole left arm and hand tumified until it was practically immovable A small tumor a little more than an inch in diameter had also appeared in the right breast, and the glands of the right axilla were quite enlarged The pelvic organs were also involved, and micturition was difficult The patient now despaired of relief, and was content to make herself as comfortable as possible until the end, which came a few months later

The conclusion which has forced itself upon my mind through the observations made on this case is, that carcinoma can be benefited by mild galvanic currents of large quantity frequently applied percutaneously

DISCUSSION

Dr Wallace asked if Dr Nunn had used cataphoresis in connection with the galvanic current During the past year he had himself employed mild currents with cataphoresis on a case which had been diagnosticated by two surgeons as carcinoma He had used cataphoresis with iodide of potassium, passing the iodine through the tumor After twelve treatments the tumor began to diminish, and it had now entirely disappeared

Dr Lucy Hall-Brown said that probably many of the members had from time to time dispersed tumors of the breast which gave evidence of being carcinomatous, and yet because they had disappeared there had been a doubt thrown on the diagnosis In the case reported in the paper, the fact that electrical treatment had been interrupted and the condition finally proved fatal prevented any such doubt being thrown upon the case

The President said he had had two cases in point Formerly, he had been of opinion that by the use of from 15 to 20 milliampères of current these tumors of the breast could be removed At one time a patient had come to him from Kansas with a tumor of the right breast about the size of an English walnut The treatment, as outlined, was tried, and he had had the satisfaction of seeing that tumor entirely disappear within two months From the stinging in the breast and the retraction of the nipple he had felt that it might be malignant She was told to return if there was any recurrence, and she did so in about six months, with a tumor of about the same size as the first one, and in the same location A second trial was entirely unsuccessful, and the tumor went on and involved the entire breast The breast and axillary glands were removed by operation, yet within a year she died of carcinoma of the liver Recently he had had a second case, which he had at first looked upon as benign The family history was excellent The tumor involved the left breast and was not adherent to the muscle or the skin, and the glands in the axilla were not involved The electrical treatment was tried almost daily for four or five months, using a current of 20 milliampères The only effect was an interference with the circulation about the growth, and the production of slight absorption surrounding the growth, but not of the growth itself Removal of the breast was advised, but the patient would not consent for two or three months, and at the time of the operation it was found that the axillary glands were involved and that the growth was a carcinoma He felt that the *first* tumor in the first case was not malignant, but was perhaps a temporary obstruction of the ducts

Dr Nunn, in closing the discussion, said he had not used cataphoresis in this particular case The only value of the paper was to show that the tumor really was a carcinoma, as had been so well appreciated by Dr Brown It was because of the certainty of the diagnosis that it was interesting to observe the effect of the electrical treatment

(To be continued)

SOCIETY NEWS

The American Pediatric Society will hold its seventh annual meeting at the Virginia Hot Springs, May 27, 28 and 29, 1895 The society will be the guests of the Virginia Hot Springs Company

Address by the President, F Forchheimer, Cincinnati, Ohio

Cerebro-Spinal Meningitis in an Infant six days old, by T M Rotch, Boston, Mass

Purulent Otitis Media, which ended fatally (three cases), by Wm F Lockwood, Baltimore, Md

Pyo-Pneumothorax (case), by Walter L Carr, New York City

Traumatic Aphasia, Scarlatina Anginosa, Croupous Pneumonia (case), by Samuel S Adams, Washington, D C

Hyperpyrexia (cases), by Henry D Chapin, New York City

Sarcoma of Kidney in an Infant (case and specimen), by J Henry Fruitnight, New York City

Lympho-Sarcoma of Spleen (case and specimen) by George N Acker, Washington, D C

Tetanus Neonatorum, by J Lewis Smith, New York City

Infantile Tetany, by M P Hatfield, Chicogo, Ill

Tetany (two cases), by Floyd M Crandall, New York City

Amyloid Disease in Children, by B K Rachford, Cincinnati, Ohio

Typhoid Fever in Infants under 2 years—Is it frequent? Wm Perry Northrup, New York City

The different forms of Eruption which Simulate Scarlatina, and their differential Diagnosis *a*, Some forms of Eruption Simulating Scarlatin, by A D Blackader, Montreal, Canada, *b*, Scarlatiniform Exanthem, by Charles G Jennings, Detroit, Mich , *c*, Scarlatina, with intensified Eruption and poorly marked Constitutional Symptoms (several cases), by Louis Starr, Philadelphia, Pa , *d* Extensive Gangrene following Scarlatina, by James C Wilson, Philadelphia, Pa , *e*, Difficulty in Differential Diagnosis, by J P Crozer Griffith, Philadelphia, Pa , *f*, Local Treatment of the Skin in the Eruptive Fevers of Children, by A Seibert, New York City General discussion

Case of Adherent Pericardium in Children, with Enormous Heart Hypertrophy, Chronic Proliferative Peritonitis and Recurring Ascites, by William Osler, Baltimore, Md

A Rupture of the Bladder (case and specimen), by John Dorning, New York City

Cardiac Anomalies *a*, Cor biloculare, *b*, Pulmonary Veins opening into Right Auricle, *c*, Imperfect Ventricular Septum in a Man, aged 45 years, by William Osler, Baltimore, Md , *d*, Aorta arising from the Right Venticle, by George N Acker, Washington, D C , *e*, Patent Ventricular Septum, by A Jacobi, New York City

The Characteristic Features of the recent Epidemic of Grippe—1894–95 *a*, Pulmonary Manifestations, *b*, Aural Manifestations, *c*, Glandular Manifestations Discussion by L Emmett Holt, Wm Perry Northrup and Henry D, Chapin, of New York City, and A D Blackader, of Montreal, Canada

Antitoxin in Diphtheria *a*, Results in Laryngeal Cases, *b*, The Cause of Death in Fatal Cases, *c*, Efficiency for the purpose of giving Immunity, *d*, Immunizing Effect of Antitoxin in Diphtheria, by F Gordon Morrill, Boston, Mass , *e*, Personal Experience with Diphtheria Antitoxin and Blood-Serum Injections, by Augustus Caillé, New York City, *f*, the value of the Antitoxin of Diphtheria and its Toxic After-Effects, by A Seibert, New York City

Cases Apparently Diphtheria, but in which the Diphtheria Bacillus is not found, by E M Buckingham, Boston, Mass

Cases of Scurvy, by A Jacobi, New York City

Chicago Ophthalmological and Otological Society—Regular meeting held at the Saratoga April 9, 1895, Dr Hotz in chair There were eleven members and visitors in attendance

The minutes of the last meeting were read and approved

The applications of Drs W R Fringer and A B Hale were referred to the Committee on Membership

Dr Gradle showed a man of 40, who in February, 1895, contracted a severe cold in the head but had no symptoms of grippe A few days later he had vertical diplopia which, however, disappeared shortly, and the lateral diplopia appeared When first seen, March 26, with the exception of a slight lagophthalmus, there was no evidence of any paresis of the facial nerve There was slight ptosis, complete paralysis of the external recti but other muscles all right To-day he can move eyes outward somewhat March 26, there was marked vertical nystagmus, now gone, but lateral nystagmus on looking to the side Some dimness of vision March 26, now gone Both knee jerks are exaggerated, there is decided fibrillary twitching of the orbiculares, color vision and fields are normal, pupils and fundi normal Is taking large doses of potassium iodid

Dr Holmes had a case, a woman 50 years old, who had very severe paralysis with diplopia following grippe She recovered under tonics

Dr Montgomery has a young man, healthy, who had, without apparent cause, paralysis of all external muscles except superior oblique of right eye He took 700 grains potassium iodid a day without effect, but is now improving under galvanic treatment

Dr Bettman reported two cases of grafting by combined pedicled flap and Wolfe flap Both cases were very large flaps but adhered nicely with good appearance

Drs Williams, Montgomery, and Gradle had found that any kind of graft shrank very much in time

Dr Hotz prefers Thiersch grafts because they do not leave so much thick skin, except where it is possible to use scar tissue with a pedicle

Dr Coleman reported a case of hemianopsia Woman, 18 years old, good personal and family history Seven weeks ago, on awakening in the morning, noticed she could see but half an object, also noticed an appearance as of a lighted match waved before the eyes, producing silvery waves This was followed in about an hour by pain through the temples and then vomiting of greenish fluid Had been under medical treatment for a cold or grippe for five weeks and had to stop work Has had no headache for seven weeks, no loss of memory, feels very well, works as well as before attack Fundi normal, fields right, up, down, and in, normal, out, contracted to 10 degrees, left, up, down, and out, normal, in, contracted to 5 degrees V in each eye 20—15 Wernicke' "hemiopic pupil" reaction more marked in right eye Diagnosis lesion in visual center posterior to oculo-moto nucleus

Dr Gradle spoke of the significance of the odor of th discharge in chronic suppurative catarrh of the middle ear He had noticed that the disappearance of odor is the firs evidence of benefit of treatment He begins with thoroug cleansing, inflation and insufflation of boric acid If the odo has not disappeared after these treatments he feels sur that the case can not be cured by this method He the syringes the middle ear by canula if possible, if this doe not suffice, he syringes through Eustachian catheter I necessary, alcoholic or ethereal solutions of iodoform ar used and then scraping of carious spots with spoon He ha found peroxid of no more value than water

Dr Williams spoke of a case recently examined for colo vision, where the man could pick out all the greens, if told t pick out green, but could not pick out all to match th Holmgren green when no name was given This man als could name a light red lantern without a mistake but calle a dark red one, green This case shows the value of differen tests and also of standard colored glass Dr Williams als showed a modification of Buissen's photometer

Society adjourned by limitation

C P Pinckard, Secretary,

103 State Street

NECROLOGY

Julius Kaemmerer, M D , of Atlantic City, died May 13, the sixty-sixth year of his age He was a native of Ge many, was educated at the University of Heidelberg, studie and practiced at Paris, but came to this country about 186 He lived in Philadelphia twenty-four years, going thence t the above-named city about twelve years ago The fat illness was referred to pneumonia

John Condit Halsey, M D , of Brooklyn, died at the rip age of 80 years, from infirmities due to old age He was native of the city named and was educated there and New York City In 1834 he graduated in medicine at th College of Physicians and Surgeons, after which date he w for a half century an esteemed family practitioner in th city of his birth He retired from practice about ten yea ago, being led to that step by reasons referable to physic disability He was one of the oldest living members of th Kings County Medical Society and of the Physicians' Mutu Aid Association

J Henry Leonard, M D , of Chicago, May 19, aged 28 — M H Henry, M D , of New York, May 20, aged 59 ——G Cooper, M D , one of the founders of Garnett, Kan , May ——F E Crosby, M D , of Jackson, Mich , May 16 ——W Winter, M D , of Princeton, Ill , May 15, aged 69 ——G Talbot, M D , of Denver, Colo , May 15 ——J W Larrabe M D , of Skidmore, Mo , May 10 ——Oren T Maxon, M D , Evanston, Ill , May 9 ——William Waite, M D , of Kappa, Il May 17, aged 30 ——J H R Wolfe, M D , of Baltimore, M May 14, aged 65 ——M S Coffman, M D , formerly of S Francisco, at Solomonville, Arizona, May 5 ——W N Gree of Webster City, Iowa, May 9, aged 39

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On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly

Gentlemen already members of the Association should send their annual subscription to the Treasurer or direct to the JOURNAL office

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SATURDAY MAY 25 1895

A WELCOME ALLY

What another esteemed contemporary journal[1] styles "the mother of all journals of medical associations," to wit, the *British Medical*, devotes a leading article in its issue of the 4th inst , to a discussion of the subject of a Department of Public Health for the United States and of the action of the AMERICAN MEDICAL ASSOCIATION to this end The article is judicious, well-timed and gratifyingly appreciative of the situation After reciting the various preliminary steps that the ASSOCIATION has taken in this matter, and recognizing the excellent work done in the field of public hygiene and preventive medicine through the agency of different medical departments connected with the public services and scientific bodies, it is contended that the Government can, in a wider way, promote the public welfare by creating a Department of Public Health, "the head of which should be a physician, a member of the Cabinet and on a position of equality with the heads of the Government Departments "

It is shown that the work of such a Department, as set forth in the bill advocated by the ASSOCIATION, may be regarded as covering all that is done by the Medical Department of the Local Government Board in England, by the Registrar-General's Department, and by the Factory Department of the Home Office, and that it is intended to be provided with the machinery for compiling information for the purposes of the various State and other bodies on a multitude of social and health subjects, including the questions of food supplies, intemperance, prostitution, elementary education, etc The *Journal* adds

"It is not to be wondered at that the AMERICAN MEDICAL ASSOCIATION and the leading members of other learned bodies in the States should regard this question as one of prominent importance However the matter may be explained—and we do not doubt that there are certain political explanations—the fact remains that the great nation across the Atlantic is distinctly behind the times in not having a central Public Health Department Almost every year such departments in older and much smaller countries are being either created or re organized on such a footing as to make them of real service for the purposes of the public and the State These departments are also placing themselves more and more in evidence every year by means of annual reports on their proceedings In the United States the place of such reports has hitherto been largely taken by the annual volumes of the various State Boards of Health, but these vary very much in character, and many of them are coming to be mainly concerned with matters of local interest It would, however, be otherwise were the vast amount of information available through the State Boards and other bodies sifted and formulated in a form for general use The States would, under such circumstances, have material at their hand such as few other nations possess "

MR ERNEST HART recently went to India and stirred up the red-tape animals in that country to good effect in the interest of the profession Still later—in the last issue of the *Journal* received, that of May 11—he roundly scores His Royal Highness, the DUKE OF CAMBRIDGE, Commander-in-Chief of the British forces, for the manner in which he referred, in an after dinner speech, to SURGEON MAJOR ROBERTSON, one of the most heroic of the heroic defenders and relievers of Fort Chitral, as "that brave civilian " MR HART does not hesitate to characterize the phrase as "a wanton affront to the medical officers of the Army," and boldly warns H R H that the matter will not be allowed to rest, that his dictum shall not pass unchallenged MR HART has long been credited with the courage of his convictions, but nothing less than the most profound conviction of the lofty character of the profession, the keenest jealousy for its honor and zeal for its advancement could inspire the courage necessary for this outspoken censure of a Royal Personage MR HART may paraphrase the utterance of the poet TERENCE and say

> MEDICUS *sum* MEDICINI *nihil a me alienum puto*

On behalf of the AMERICAN MEDICAL ASSOCIATION, its JOURNAL welcomes him as a potent ally in our battle for a Department of Public Health

THE SOCIAL POSITION OF THE MEDICAL PROFESSION

Every now and then some medical journal gives us a dismal editorial about the social position of the medical profession, about the lack of influence of the doctor in public affairs, about the inferior rewards of a medical career, or about the over production of doctors, and then each writer falls to wondering why young men will still insist upon studying medicine The most plaintive and doleful of these lays appear in certain of our contemporaries on the Eastern fringe, and they are pitched in so dismal a strain that one unconsciously feels that the writer must have chronic dyspepsia or a twinge of colic The British journals have always been the loudest croakers on this score—because forsooth the Queen, when she is making peers does not make her Pagets, and her Clarks, and her Listers, lords or cabinet ministers instead of ordinary knights and baronets, like brewers and bankers and other common cattle—as if the class to which Isaac Newton and Humphrey Davy belonged was not good enough for anybody, or as if it could add anything to the fame of a Joseph Lister to be a cabinet minister or belong to the "Prince of Wales set" Perhaps our home journals, with just a suspicion of anglomania, take their cue from their British confrères

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[1] The Provincial Medical Journal of Leicester, England May 1, 1895

These lamentations are as weak as they are indiscreet, and it is hard to find any other reason for it than the inherent tendencies of men to complain It is hard to get rich in medicine, or to gain social or civic recognition, or to become intellectually prominent, just as it is in every other walk of life There are too many doctors, as there are too many lawyers, engineers and architects, but in comparison with all these, we trust our modesty will be pardoned, when we say that it has always seemed to us that the doctor had a little the best of the bargain, both in a material and a social way

As to the doctor's social position, it is not evident that he ever had to sit at the lower end of the table Great medical men have continually occupied positions commensurate with their abilities Even in England, where every one, like "little Tommy dearly loves a lord," it is hard to see where the doctor has failed to hold his own Going as far back as Harvey, we find that he was a rich man, the favorite brother of rich London merchants and the associate of his king Rough John Hunter was the friend of the courtly Sir Joshua Reynolds, and Richard Meade a favorite of Charles II Sir Astley Cooper, throughout life a man of commanding social position, when 23 years old married a belle and an heiress—indeed, marrying heiresses has been a favorite avocation of doctors from the earliest times, one which, by the by, shows no sign of abating, and it is nowhere recorded that women, particularly rich women, are careless of social position Sir Henry Holland was the acquaintance of all the great men and women of his time and the intimate friend of not a few of them And coming to the present time in England, Morell Mackenzie seems to have stood pretty well with royalty itself The Duke of Edinburgh and Sir James Paget have been patrons, side by side, of all the notable charitable functions for twenty years Andrew Clark was the intimate friend of Gladstone, who came almost from a sick-bed to give loving testimony to the memory of his dead friend and to the character of the profession which his friend had so highly adorned And, considering for a moment the continental Europeans, every one at once remembers that Baron Larrey—he of the hip-joint amputation—was the int mate friend of Napoleon, who in his last will gav evidence of his sincere friendship by an appreciativ message and a bequest of 100,000 francs In Ger many, Esmarch's wife is aunt to the present Empero

As for the social position of the medical profe sion in America, it would seem that little need b said As we have intimated, the doctor has usuall seemed to us to have a little the best of it He ha certainly held his own from the beginning D Joseph Warren was the greatest loss of the battle Bunker Hill Old Benjamin Rush was a signer the Declaration—and if that isn't simon-pure Amer can aristocracy, will some one please tell us what is We have never seen any one who had the temerity question the social position of the Warrens or Bigi lows of Boston, or of the Drapers, or Janeways New York, or of the Wisters, or Woods, or Mitc ells, or Pancoasts, or Peppers, of Philadelphi And, coming down to individuals, take for exampl Valentine Mott, or Alonzo Clark, or Willar Parker, or Marion Sims, or Fordyce Barker, Polk, or McLane, or the Flints, father and son, Draper, of New York, or S D Gross, or Wm Pe per, or H C Wood, or S Wier Mitchell, of Phil delphia, or Oliver Wendell Holmes, or Henry Bowditch, or J Collins Warren, of Boston there are any gentlemen whose standing in the com munity is better than these it ought to be ma known

One of the Vanderbilts married a hospital i terne, and we have no doubt that she could not ha done better And—if anything else is needed make our happiness complete—the brilliant editor the *Medical Record* was at the Gould wedding

But our pessimists say in reply to this, that this all very nice, but fine words butter no parsnips, a all this has nothing to do with the rank and file the profession The fact is the average prosperity the rank and file is the best answer to these imput tions The rank and file of the medical professi in this country hold a most powerful position So of the most enviable places in life that one ever se are held by family doctors in good towns—and n always in large towns either The first man emergencies, the adviser in physical and in the mo intimate domestic affairs as well, the one upon wh all depend, at the childbirth and at the bedside the sick, the equal of any social position and t superior of most in mental and moral endowmen such a man, with his family, leads a life of the m solid satisfaction His material prosperity is su cient for his comfort, his surroundings are con cive to independence and happiness, his sons a daughters have good advantages, he himself has the inestimable satisfaction of knowing that he plays a large part in his community, and when he dies he leaves a void, that if any gap in life were irreparable, would be irreparable All doctors can not occupy positions like these, but the point we are making is, that in comparison with other men, the doctor has fully his share of these positions of influence and of reasonable prosperity

We all know full well that the doctor's life is not all rosy, but the lack of social position or influence is not one of its objections Like other men, the doctor is what he makes himself, socially and otherwise His profession, if it has any weight as regards his social position is, we believe, rather in his favor In fact, when one remembers some of the doctors of the type of MARION SIMMS and S D GROSS and FORDYCE BARKER—men of their type in large communities and in small—he is inclined to say, paraphrasing Sidney Smith on the strawberry, that doubtless God might have made a better man than a good doctor, but doubtless he never did

THE EDUCATION OF THE JAPANESE HOSPITAL CORPS

There is no reason why the Hospital Corps men of the Japanese Army should not be thoroughly educated, for ample provision in the way of books has been made for them Three text-books on military nursing have been issued, and one on the use of the stretcher The three are apparently graded and are probably intended for those who in Japan are the equivalents of our private, acting hospital steward and steward, as one consists of only 140 pages, while the second has 280 and the third 600 pages To the professional eye, educated in the medical lore of our western civilization, the text of these volumes, consisting of pot hooks, hangers, gridirons, harps and other complicated hieroglyphics, conveys no suggestion of the subjects discussed

Indeed a casual observer might consider the end of each book to be its beginning, but they are all so profusely illustrated that the said professional eye experiences no difficulty in following the whole subject from its beginning where we usually print "finis," to its end, where we usually have our title page Most of the illustrations show their western extraction in the facial characteristics of the individuals represented, and on some are to be found our familiar Arabic numerals on points calling for explanatory text There are, however, some original Japanese cuts, particularly in the litter-drill book The largest volume contains most of the illustrations found in the others, excepting some of those relating to stretcher drill First, we find full page front and back views of the male figure, with western numerals over the swelling masses of the well developed muscles Then follow the skeleton, the teeth showing crowns, bodies and fangs, the *écorché*, or flayed figure, teaching the location of the superficial muscles, the circulation through the heart and through the body, pulmonary and systemic, vertical sections of the eye and ear, and the thoracic and abdominal viscera *in situ*

Thus far anatomy and physiology have evidently been discussed, but now we come to matters of practical interest hemorrhage controlled by forced flexion at the elbow, digital pressure on the femoral, brachial, subclavian, carotid and facial arteries, the tourniquet on the brachial, ESMARCH'S tubing on the femoral and a handkerchief twisted by a sword bayonet over the same vessel Dressings follow the arm sling, four-tailed bandage for the chin, the triangular bandage with its pictures which ought sufficiently to explain its use, but these are supplemented by special cuts showing its application to the shoulder, elbow, hand, ankle, groin, scalp, etc , the roller and its reverses on various parts of the body

Next, fractures come in for consideration as evidenced by a wire cradle, metal leg splint with foot piece, extension by weights and SMITH'S anterior applied SYLVESTER'S method of artificial respiration is illustrated, both at inspiration and expiration, but if MARSHALL HALL is mentioned his name must have been translated into unrecognizable hieroglyphics

Field work follows litters extemporized of poles and cords, rifles and overcoats, carrying patient to litter, two- and four-handed seats After this, for nearly three hundred pages, the only illustrations are a spring scarificator and a cupping glass, military nursing is no doubt being discussed The litter drill book repeats the anatomic illustrations and those relating to hemorrhage bandaging, etc It shows the position of the squad at the open and closed litter and the wheel of the litter in changing direction From the illustration showing the squad placing a patient on the litter, it is manifest that the Japanese Hospital Corps have not learned the best way They rise with the patient to the erect attitude, in order to lay him down on a litter almost on the ground level Truly, a doctor can gather much information from these volumes, although not a single word is intelligible to him

THE HORNED MEN OF AFRICA

For many years reports have been current of the existence of horned men in West Africa In 1883 PROFESSOR MACALISTER, then of Dublin, now of Cambridge, collected the evidence accessible at that time[1] At first the growths were thought to arise from the superior maxilla, and as this region is well known to be a favorite site for exostoses, it was supposed this so called horned condition was caused by symmetrical exostoses MR JONATHAN HUTCHINSON has published in his "Illustrations of Clinical Surgery" a figure of a male European thus affected which closely resembles that of a horned man furnished by Macalister

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[1] Proceedings Royal Irish Academy

A great deal of light has been lately thrown on this condition by M Maclaud, a French naval surgeon serving on the Ivory Coast In the *Archives de Medicine Navale et Coloniale* this author gives an account of seven cases he has observed The affection is termed by the natives *Goundou* and *Anakhre* (big nose) in the Aqui language His cases ranged from 8 to 65 years in age, and the tumors had existed from a few years up to thirty years M Maclaud had one man under observation for several months, and describes the tumors as being symmetrical, as large as a hen's egg on one side and as a large nut on the other, they were ovoid, hard—a hypodermic needle would not pierce them—circumscribed, and occupied the lateral walls of the nose extending from the root to the canine fossa, making part of the nasal, lacrymal and superior maxillary bones There was no trace of tuberculosis, syphilis, leprosy or glandular swellings. Examination of the nasal fossæ showed the tumors to encroach on them Smell was intact, but nasal respiration was embarrassed Percussion of the tumors showed them to be hollow This individual was a slave 20 years of age, who had been captured and carried to the Aqui country when about 8 years old—the tumor beginning to grow in a year's time after his arrival The author mentions another case as being a horrible sight this was an old man with a tumor on one side as large as an ostrich egg, on the other as a large orange, vision on the side of the larger one had been abolished for years, and the right eye had been forced from its orbit by the growth

The affection begins in late childhood by epistaxis, cephalalgia and sometimes a muco purulent discharge from the nostrils At first the tumor is no larger than a bean, but, slowly increasing, is as large as an almond at 15, a pigeon's egg at 20, and so on It never suppurates, and apart from the destruction of vision does not seem to occasion any inconvenience M Maclaud thinks it probable the condition arises from lesions produced in the nasal fossæ by the larvæ of flies He points out that the disease is not hereditary, and that it is confined to the forest region where flies abound On his way home he saw a chimpanzee affected in a similar way, but lack of time prevented an investigation The natives account for its origin by attributing it to the malevolence of a fetich *Jeio* or *Zoré*, a statue of which carved in wood bears similar swellings, if appealed to too often the fetich, becomes irritated and inflicts these horns upon the annoying supplicants Owing to this supernatural origin they use nothing save the usual remedies for all diseases—cataplasms of pimento or aromatic plants, bathing with pimento, etc

In concluding his highly interesting paper, Dr Maclaud states that one or two cases may be found in any village of 100 or 150 inhabitants

A NEW ARMY STRETCHER

A board of which Col Charles H Alden is President was convened at the War Department some time ago to investigate and report upon the form of litter found to be best suited for Army use, having in view economy, simplicity of construction, durability lightness and adaptability for the services required The board has submitted a new model for the consideration of the Surgeon-General, who, it is understood will bring the specifications and a litter constructed in accordance with them, to the notice of the U S Military Surgeons at their meeting in Buffalo, N Y

The main object of the board was to lessen the weight of the litter without impairing the strength of any of its essential parts The present regulation litter weighs twenty-four pounds, but the new model weighs only sixteen and one-half pounds, and if adopted will be the lightest military litter in any service

The litter poles are made one and a half inches wide instead of one and three-quarters, but the depth on which comes the greatest strain remains one and three-quarters as formerly The canvas is practically the same as that of the regulation litter but it is so fastened to the poles as to be flush with the wood and thus less exposed to be ripped off The feet are stirrup-shaped, of malleable iron, the cross braces of well-tempered steel The pole plate of each foot is fastened by a single bolt and it is turned up at the sides to grasp the pole The foot plate, which is slightly convex in every direction, raises the under surface of the pole four inches above the ground level The braces play on the pole plates of the foot pieces and are hinged in the middle, with a fenestrum behind the joint to prevent clogging with mud o dirt They are grooved longitudinally on four aspects to lessen weight, and provision is made for keeping them in place beneath the poles when the litter is closed The sling is of strong webbing, the color of the bearer's blouse, and is to be worn by him as part of his equipment when on litter service It has a leather-lined loop at each end to catch the handles of the litter and is adjustable to the height of the bearer by a sliding buckle

The new model has been tried by Captain Cabell of the Hospital Corps Company, at Washington Barracks, and has given satisfaction The present sling is attached to the handles of the litter The adoption of the new model litter and sling would necessitate a revision of the Drill Regulations of the Hospital Corps, as most of the intricacies of the present drill are provisions for getting into and out of the attached sling and for preventing its bight from doing harm when not over the shoulders of the bearer where it always ought to be

NOMENCLATURE OF PREGNANCIES

Dr George M Gould, the erudite philological editor of our valued contemporary, the *Medical News*, protests against the terms ii para, iii para, iv para, v para, etc, used to designate a multi para in her second, third, fourth or fifth pregnancy, and thinks it strange that the remarkable fecundity of the medical lexicographers has not been equal to the emergency of devising names for these simple facts instead of designating them by a set of unpronounceable monstrosities With what he calls "proper fear and trembling," Dr Gould suggests the substitution of coinages made upon the same plan as similar words accepted and in general use "Possibly this has already been done We now have the words, nullipara, primipara and multipara Why should we not also have duipara (or deutipara), tripara, quadripara, quintipara, sextipara, septipara, octipara, nonipara, decipara?" Why not, indeed? Unless medical language, like the language of diplomacy, is to be used to conceal and obscure, there is no occasion for timidity in offering these valuable substitutes for the impracticable cacophonies now in use Dr Gould has made another distinct addition to clearness and simplicity in medical terminology, and the Journal promptly accepts it

A MISAPPREHENSION

Some of our lay contemporaries have animadverted on the clause in the report of the Trustees which gave the net cost to the Association of the Journal as $12,000 The explanatory fact that over one half of this amount was expended in new machinery, seems to have been overlooked, although it was plainly stated in the report

But the great point that nearly the whole edition was *given* to the members without additional cost was nowhere stated as it was supposed the members knew that Subtracting the cost of the new machinery from the total cost to the Association Treasury, it is apparent that the net cost of the Journal to the members was less than $2 each, for a Journal worth $5

No journal has published more material during the year, few have been better on the whole Taking therefore the facts as they stand, it is seen that the members have every reason to congratulate themselves on the financial showing made by their Journal

If we could only raise the list to 10,000, the proportionate drain on the treasury would be infinitesimal Let every true friend secure one new member by application, or one new subscriber, and the Journal will not only be a still better Journal, but it can be given to every member, at an even less cost

CORRESPONDENCE

The U S Pharmacopœia

Shelbyville Ind, May 16 1895

To the Editor —In the Journal of April 13, I notice a letter from Dr W P Whery, of Fort Wayne, Ind, under the title, "Of What Use is the Pharmacopœia?" I have waited this long hoping some one more able to do so than myself would reply to it

While I do not, for a moment, think such an excellent work as our present Pharmacopœia needs any defense at my hands, I shall point out a few of the most *glaring* inaccuracies in the article referred to I shall also attempt to show that the U S Pharmacopœia has, at least *some* excuse for its existence, and that it is *the* authority upon "questions pharmaceutic" In the first place, the U S Pharmacopœia is a work of great value and is *the standard* from which *all pharmacists* work in making their various preparations such as tinctures, fluid extracts, syrups *solutions*, etc Does not the Doctor know that when a prescription is written for tincture iodin, tinct gentian, syrups, etc, that it calls for a preparation of a definite strength and prepared in a certain way and that the *standard* by which those preparations are made *is the U S* Pharmacopœia If not how are we to know anything about the strength of any preparation we may prescribe or about *the dose* of the same? Does he not know that the pharmacist uses the Pharmacopœia in making his preparations? and that it is his *sole guide* in so doing?

I know that during my experience as a prescription clerk, I always strictly adhered to it as my guide in making up the various preparations I would also like to ask if the Pharmacopœia is of no use, as the Doctor says, why is it so universally used in this country?

I do not mean to say that I think the book is perfect, for no such book can be made so If physicians, generally, would study their Pharmacopœia more, and the literature sent out by manufacturing houses less, they would be far better off and could serve their patients better

In answer to the question, Of what use is it? I will say a Pharmacopœia is a book containing a selection of medicinal substances with formulas for their preparation The necessity for legalized standards to define the character, establish the purity, and regulate the strength of medicines is recognized by all civilized nations Remington's Pharmacy (page 26) says "The official pharmacopœias are all issued under *the authority* of the respective governments, with the exception of the U S Pharmacopœia (which has, however, been accepted by the government as a standard in some of the departments), the policy of the nation having been against interference in matters which relate to restrictions upon professional practice This course has not prevented the acceptance of the work by physicians and pharmacists as an authoritative guide, while it has probably encouraged a greater freedom in criticism, and thus developed more general interest in a standard, and a stronger desire for improvement than could have been obtained through compulsory legislation"

Dr Whery begins his letter "I do not wish to disparage the United States Pharmacopœia in the least, nor to detract from the great merit of a work involving so much conscientious care and science and labor on the part of its authors, but I think I voice the feeling of the profession generally when I ask the question written above"

In another portion of his tirade he says "Under these circumstances the Pharmacopœia seems to be out of gear with the times and is to be looked on as a kind of survival from the past, like the great auk and the woolly rhinoceros Yet it is quite possible that there is still a place for a United

States Pharmacopœia, provided that the book can be made to suit the conditions of these days Until then, it is only an expensive luxury, and an unnecessary imitation of works that—under the different laws of European countries—may have some good right of existence "

Now let us look at these two statements Dr Whery does not wish to "disparage," and then *attempts* to do so Let me ask *why* the U S Pharmacopœia is an "expensive luxury?" *Why* is it "out of gear with the times?" In what way is it so? Please specify *Why* does "it not suit the conditions of these days?" Perhaps he has been reading an edition thirty or forty years old He intimates that the U S Pharmacopœia is an "imitation" If so, *of what?* Again, if it is an "unnecessary imitation" of some foreign pharmacopœia *why* is it "a work involving so much conscientious care and science and labor on the part of its authors?"

During the past eight or ten years, I have had an opportunity of examining a number of pharmacopœias of different nations, and I believe ours is *second to none* and, above all things, it is *original*

The Doctor would also like to know, "what number of physicians use it in their practice?" I am sorry I can not inform him as to the exact number, but I believe that *all* of the educated physicians who have a conscientious desire to be good physicians and to benefit their patients use it as their guide As for myself, I have the latest edition and use it frequently too

The Doctor would also like to know "what drugstore confines itself to the U S Pharmacopœia or cares for it as an authority?" I believe the pharmacists *all* use it as their *sole guide* in making up the various preparations such as tinctures, syrups, etc For any information on this subject I would respectfully refer the Doctor to Mr Otto Gross, of his own city, whom I know to be one of the best as well as one of the most progressive pharmacists in Indiana I would like to ask the Doctor what the pharmacists use as their guide if they do not use the U S Pharmacopœia? They *must* use some guide, and I would like to know *what it is*

Dr Whery is evidently attempting to place the pharmacists on a level with the grocer, hardware merchant and other tradesmen, instead of elevating them to their proper position as a profession As for myself, I have too much respect for pharmacists in general to believe that they *buy* such things as tinctures, syrups, spirits, waters, etc, instead of preparing them in their own store

The Doctor, evidently, has not been keeping in touch with progress in pharmacy, as the following will clearly show "In the United States there is no legal control of pharmacy" In reply to this assertion, it is only necessary to say that *every State* in this broad land of ours (except Indiana), has a pharmacy law, Indiana is now the *only exception*, and it is to her lasting disgrace that it is so The Doctor asks "What medical college uses the Pharmacopœia as a text-book for teaching materia medica?" While I do not know of any medical college that uses it as the *exclusive* text-book upon this branch, I do not know of a medical college that does not use it as *one of the text-books* upon materia medica I would like to ask the learned (?) Doctor *how* "the profession—including pharmacy—has emancipated itself from the Pharmacopœia?" If all he says is true, *why* should "we regret to give it up?" In *what way* should it be "recast?" What is the matter with its "present form?"

The Doctor says "More regard must be paid to the convenience of prescribers, the confusion between waters, liquors, and solutions, syrups, elixirs, and glyceroles, tinctures, wines and spirits, and so on, should be abolished" How pay "more regard to the convenience of prescribers?" What *does* he mean? I am sure that if there is any "confusion" between these preparations it exists only in the addled brain of the writer I shall here give a concise definition of each of these preparations in order that he may know what each is and there need be no more "confusion" However, before proceeding further, I want to quietly give the Doctor "a pointer" or two Don't ever again make the mistake of saying "liquors *and* solutions," for it is two names for the same thing You should say liquors *or* solutions I also want to call his attention to the fact that there is no such class of preparations in our Pharmacopœia as "*glyceroles*" I suppose he means, *glycerita* or *glycerites* They are mixtures of medicinal substances with glycerin In regard to the difference in name, I quote the U S Dispensatory, 17th Ed, page 654 "The solvent and preservative properties as well as agreeable taste and permanent consistency of glycerin render it useful as a menstruum in pharmacy, and a class of preparations consisting of medicinal substances dissolved in it has come into extensive use The British Pharmacopœia has adopted such a class under the name of *glycerina* or *glycerines* This title is not now available because these terminations are reserved for alkaloids, while the term *glyceroles*, adopted by the French, is objectionable, as the termination has been used as a designative of certain proximate principles But the United States title *glycerita*, or *glycerites* is satisfactory"

"Aquas" or "waters" may be simply defined as aqueous solutions of volatile substances "Liquors or solutions" (not "liquors *and* solutions") Under this head the U S Pharmacopœia places all aqueous solutions of non-volatile substances, except such as naturally form separate distinctive classes, as the syrups, infusions and decoctions Solution of gutta-percha is the *only one* in the class which is not prepared with the solvent, water Syrups are concentrated solutions of sugar in water or aqueous liquids When water alone is used in making the solution of sugar, the preparation is called syrup or simple syrup When the water contains soluble principles from various medicinal substances, the syrup is called a medicated syrup Elixirs are aromatic, sweetened, spirituous preparations, containing small quantities of active medicinal substances Tinctures are alcoholic solutions of medicinal substances They differ from "spirits" in being made from non volatile bodies, there being but one exception to this rule Wines are liquid preparations containing the soluble principles of medicinal substances dissolved in wine Pharmaceutically they most resemble "tinctures," differing from them merely in the character of the menstruum Spirits from a pharmaceutic point of view are simply alcoholic solutions of volatile substances Like the medicated waters, the active ingredient may be solid, liquid or gaseous

Dr Whery says "Powdered extracts, tablets and troches should be recognized" If he will examine his Pharmacopœia he will find troches *are* recognized under the name, trochisci *or* troches As for powdered extracts, they are not recognized and *should not be* It is a well-established fact that they can not be made of a uniform strength and are consequently worthless Tablets should not be recognized, as they are a passing "fad," and I venture the assertion that ten years hence they will be practically unknown, as they possess no feature that is an advantage over the old-time preparations

I do not believe "we want a more extensive list of remedies," as there are already too many In conclusion, allow me to quote a few more lines from the Doctor's remarkable letter "A third use would be to reinforce the decimal system of weights and measures in medical usage, and to accomplish this, a new weight, the deci milligram, should be added, and the system must be made to conform to the teaspoonful until the domestic and convenient measure can be eliminated"

This surely caps the climax It seems to me that the decimal system of weights and measures *has been enforced to its fullest extent*, as it has been adopted as the *only* system in our Pharmacopœia, the old system having been *entirely elim-*

mated What more can be done to enforce it? Why not make the teaspoonful, etc conform to the decimal system, instead of the opposite course? Why derange the decimal system? I do not see the connection between a deci milli gram (?) and a teaspoonful In the metric (or decimal) system the meter is the unit of length, the liter is the unit of capacity, and the gram is the unit of weight

A gram is	15 43	grains
A decigram is	1 543	"
A centigram is	1543	"
A milligram is	01543	"

A deci-milligram would be 001543 grains or expressed in fractions it would be 1543 1,000,000 of a grain

A teaspoonful is a measure of *capacity* not *weight*, and is usually given as 1 *fluidrachm* Now what I fail to detect is the connection between 1543-1 000,000 of a grain and a teaspoonful or 1 fluidrachm Will the Doctor explain himself? And beside, to be in conformity with the metric system, would it be proper to say a deci milligram, when the *unit* of weight is a *gram* not a *milligram*? I am of opinion that deci milligram will *not* do, but that it would take another word to express what he means

I am very sorry the Doctor wrote his letter as the U S Pharmacopœia is now completely annihilated and we shall hear of it no more!

Samuel Kennedy, Ph G, M D

To Bacteriologists

Minneapolis, Minn, May 14, 1895

To the Editor —Will you kindly state in your next issue that a vacancy exists in the Chair of Bacteriology in the College of Medicine and Surgery of the University of Minnesota Applicants for the vacancy can apply to Prof Thos G Lee, chairman of the committee to nominate a person to fill the vacancy

Perry H Millard, Dean

PUBLIC HEALTH

Disinfection of Localities.—MM Laveran and Vaillard announce that from their experiments they believe the best method of disinfecting the walls of habitations consists of first washing the walls with soapsuds, then with a 5 per cent carbolic acid solution or 2 to 1000 of sublimate, acidulated In all localities which are exposed to frequent soiling—hospitals, barracks, schools, hotel rooms, etc, the walls should be of impermeable material, easy to clean and disinfect If sprays are used the liquid should be made to stream along the walls, but in this way the disinfection is often imperfect The carbolic solution is preferable to the sublimate it seems[1]

Fencing from a Hygienic Standpoint.—According to Lecomte fencing is a hygienic exercise of the first rank and even a curative means for certain deformities This exercise should be practiced in a well ventilated room, under the direction of a *maitre d'armes*, who insists on the correct execution of the movements and unrestrained postures It is indispensable to use the left hand also, in order to develop the two sides of the body equally Under the influence of this exercise the muscles develop, the joints and spinal column are suppled, the respiratory, circulatory and digestive functions are rendered active, nutrition and the nutritive changes are stimulated at the same time as the cutaneous functions Fencing has given excellent results in hysteria, chorea, migraine, hypochondria, insomnia, obesity, gout, rheumatism, constipation, and chlorosis It assures recovery from scoliosis and from stiff joints following immobilization, and corrects certain cachectic deviations of the lower limbs[2]

Sanitary Climatology—Circular No 4, of the Weather Bureau, containing information relative to the investigation of climate on health, previously noted in the Journal, furnishes blank forms of the reports desired They seem to be simple, compact and yet sufficiently comprehensive Supplies of the forms and of the blank envelope may be obtained by those interested on application to the Bureau It is intended to collate the vital statistics thus obtained with the meteorological statistics by general averages and by particular and selected events, as the comparison of the general mortality with the average conditions of the weather for the week, and the passage of storms and cold or hot waves, the appearance of epidemics, etc Also, in instances of well-defined weather disturbances comparisons of vital and meteorological statistics will be made by daily periods For example, a storm appearing in the western part of the country, will be followed day by day, as it passes eastward across the country, and the illness and deaths reported for these days from the localities traversed will be compiled and compared with the same kinds of facts reported both before and after the storm The same plan of treatment will be pursued in dealing with hot and cold waves By these methods it is hoped to be able to give in time, definite information as to how and how much the accidental and constant variations of the weather affect the sick and well, and in what way the present forecasts and weather charts can be used in both curative and preventive medicine

Health Reports—Sanitary reports to the Supervising Surgeon General, Marine Hospital Service

SMALLPOX—UNITED STATES

Arizona Nogales, May 12, 1 case
Missouri St Louis, May 4 to 11, 11 cases, 2 deaths
New Jersey Hoboken, May 4 to 11, 1 case
Ohio Cincinnati, May 10 to 17 5 cases 3 deaths
Pennsylvania Philadelphia, May 4 to 11, 2 cases, 1 death
Wisconsin Milwaukee May 4 to 11, 8 cases, 1 death
Virginia Staunton and vicinity, to May 10, 50 cases

SMALLPOX—FOREIGN

Belgium Antwerp, April 13 to 27, 3 cases, 1 death
China Hong Kong, March 31 to April 1, 1 case
England London, April 27 to May 4, 1 case, 1 death, Manchester April 20 to 27, 1 case
Germany Prague, April 20 to 27, 4 cases
Holland Rotterdam, April 27 to May 4 3 cases, 3 deaths
Ireland Dublin and suburbs, April 27 to May 4, 17 cases, 2 deaths
Russia Moscow April 20 to 27, 2 cases, Odessa, April 20 to 27, 5 cases, St Petersburg, April 20 to 27, 7 cases 2 deaths, Warsaw, April 18 to 20, 1 death
Scotland Edinburgh, April 20 to 27, 5 cases
Turkey Constantinople, March 1 to 31, 97 deaths

CHOLERA—FOREIGN

Japan Hiogo, April 13 to 20, 1 case
Turkey Constantinople, March 1 to 31, 60 deaths

YELLOW FEVER—FOREIGN

Mexico Vera Cruz, May 2 to 9, 3 deaths

Yellow Fever—A dispatch of the 18th inst from Havana says that the stories circulated in regard to the prevalence of yellow fever among the troops operating against the insurgents are greatly exaggerated According to the official records there were only 27 deaths therefrom reported up to May 18, although 200 soldiers had been treated for various diseases *Per contra*, Surgeon General Wyman, of the U S Marine Hospital Service, on his return from a tour in the South which was extended as far as Havana, reports that yellow fever is quite prevalent on the island, especially about Santiago Dr Wyman personally visited several of the United States quarantine stations along the Gulf of Mexico and along the Atlantic coast north of Florida Arrangements were perfected all along the seaboard as far as possible for a rigid enforcement of the United States quarantine regulations Dr Doty, Health Officer of the port of New York, confirms the assumption that the deaths on the steamship *Hogarth*, from Santos, were from yellow fever, and the disease, of a severe type, is epidemic at that Brazilian port The action of Dr Porter, State Health Officer of

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[1] Jour de Pharm et de Chim
[2] These de Paris

Florida, in enforcing quarantine regulations upon the Spanish cruiser *Infanta Isabella,* recently arrived from Havana, has excited considerable discussion and the Secretary of the Treasury was finally compelled to issue an order for the warship's release

Secret of Long Life—The *Journal d'Hygiene* recently commented upon the habits of life and the regimen by which three doctors—Drs Baynes, de Boissy and Salmon—have reached or passed the centenary of existence, one of them at least, still in the practice of his profession, in his hundredth year, and the two others said to be still hale and hearty at the ages of 103 and 105 respectively M Jules Hoche, a French humorist, has analyzed the *Journal's* report with a view to discovering the secret of this remarkable longevity, and finding nothing definite therein, offers a few rules of his own as follows First, never be sick, that is an essential condition, because sickness is, in principle, hostile to good health, which is the mother of longevity, by the same right that prudence is the mother of certainty Secondly, never have any bile, because bile is the vehicle of all unhealthy humors, as the world knows since the time of Hippocrates Thirdly, fall in love as little as possible This is a very important point, because all the definitions that people have given of love up to the present time are inexact To love is to give a little of one's life to somebody else, a liberality all the more absurd because the donor has no title to that which he gives, and it is evident that to waste one's life is to reach bankruptcy in short order In this matter avarice is legitimate, because it is a matter of self-defense From the elementary point of view, the only possible indications are presented by themselves never eat except when you are hungry and never drink except when you are thirsty As for sleep, it is beyond a doubt that one should never resist it, even through politeness The essential is to sleep soundly as many times as you can, because to sleep is to economize vital force Therefore, it is plain that to live long, we must in the first place be in good health, that to be in good health we must never be sick, and that in order to avoid sickness, it is absolutely indispensable to be in good health

The United States Public Health Department—For some years past it has been a prominent aim of the AMERICAN MEDICAL ASSOCIATION to secure for the United States a central Government Department of Public Health, and preliminary steps have from time to time been taken to memorialize Congress to create such Department, together with a State-paid Medical Secretary Once again the ASSOCIATION brings the matter forward in the form of a memorandum to the Senate and the House of Representatives, prepared by the Chairman, Dr C G Comegys, and appended to this document is a draft Bill to give effect to the object referred to It is admitted that much excellent work is performed through the agency of different medical departments connected with the Army, the Navy, and different scientific bodies, but it is contended that Government can, in a wider way, promote the public welfare by creating a Department of Public Health, the head of which should be a physician, a member of the Cabinet, and on a position of equality with the heads of the Government Departments Under Section 2 of the proposed Bill the work of the department is set out It may be regarded as covering all that is done by the Medical Department of the Local Government Board in this country, by the Registrar General's Department, and by the Factory Department of the Home Office, and it is intended to be provided with the machinery for compiling information for the purposes of the various State and other bodies on a multitude of social and health subjects, including the questions of food supplies, intemperance, prostitution, elementary education, etc

With regard to the organization of the Board, we believe the ASSOCIATION is right in demanding that its head and its executive officers should be medical men Indeed, we have heard only one valid reason for a change in the same direction in this country It is said that if a new department in Public Health were created it would be the youngest department in the State and would have to rank as such But the Local Government Board, which has public health functions in addition to a multitude of other duties, is gradually becoming a Ministry of the Interior, and it is assumed that when its position as such in the State is fully recognized it will probably absorb one or two functions still performed by other departments, and its chief will be raised to the position of a Secretary of State This is the ambition of the secondary State departments in this country, and there are those on the permanent staff of the Local Government Board who would resent the severance from the board of its public health functions, for such severance would diminish its importance and cut adrift a staff which, to say the least, has brought them some credit in the eyes of the public In the States no such considerations as these arise, and it is to be hoped that the new department when created will be mainly in the hands of those who best know what is wanted for the control and the improvement of the health of the public—*British Medical Journal,* May 4, 1895

MISCELLANY

Change of Address—Dr Edwin J Kuh to 3415 Prairie Avenue, Chicago

They Understood the Language (From *Judge*)—HE—"Doctor, every time I raise a hand I'm completely knocked out with pain"

DOCTOR—"Then you had better play some other game"

Sunstrokes in England in May—On May 14, while Americans of the northern tier of States were taking again to their overcoats, the English suffered from a hot wave We learn by cable that, at Portsmouth, where four thousand troops were on parade, the heat was abnormally intense, and ten men were sent to hospital on account of sunstroke

A New York College Commencement—At the thirty-second graduation exercises of the New York Medical College and Hospital for Women, held May 14, ten degrees were issued, and eight or more prizes awarded to the graduating and inferior classes The addresses were nearly wholly by the female friends of the school

An Aluminum Canteen—The military journals announce that the Ordnance Department of the Army has had submitted to it for test a canteen made of an alloy of aluminum The canteen, in shape, is somewhat like the one at present in use in the Army The authorities are said to be much pleased with it, and there is therefore a strong chance of its adoption

Michigan in Line—A bill to regulate the practice of medicine in the State of Michigan and to create a Board of Registration therefor has become a law The Board, which is to begin operations July 1, is to be composed of four regular physicians, two "homeopaths," two "eclectics," and two "physio-medicals" The law is not retro active, all physicians in practice in the State July 1, and all having diplomas from reputable colleges, being entitled to registration

Jenneriana—With the approach of the Jennerian centenary, ana concerning the discoverer and his discovery are beginning to multiply The celebration of the seventy-sixth anniversary of Queen Victoria's birthday, on the 24th of the present month, has led one of her biographers to unearth the fact that she was vaccinated in September, 1819, being then about four months old, and that she was the first member of a royal family to be subjected to the operation

A Too Radical Improvement—From the *Toronto Truth*—The physician was surprised to find the head of the household at the door with a shotgun

"Why, what's the matter?" stammered the doctor

"That there medicine you gave my wife she says is makin' her feel like a new woman And I want you to understand that no new woman business goes in this house First thing I know, she'll be out makin' speeches"

The Recent Census of New York City—The much discussed enumeration in New York has been made by the Department of Police, and appears to be a disappointment to nearly all the local prophets One effect, in the Health Department, will be the necessity to revise the death rates for the first quarter of 1895 The returns show a total population of 1,849,866, an increase of 334,515 since the United States census of 1890, but of only 47,877 since the State census of 1892 The number of males is 925,310, and of females 924,556

Another Adirondack Sanitarium—A new mountain resort for consumptives, named the St Gabriel's Retreat, will soon be inaugurated under the care of the Sisters of Mercy of Ogdensburg, New York It is to be located at Paul Smith's in the northern Adirondack region, where a plot of land, one hundred acres in extent, has been secured A large central hospital with outlying cottages has been planned, in close proximity to pine forests covering thousands of acres A very large sun bath portico will be provided One cottage has been promised by a benevolent lady living at Troy, N Y

The Point of View—Dr Thomas M Dolan, of the *Provincial Medical Journal*, reprints an item from these columns concerning the daily suicide in Chicago in the early part of the year, and adds "We rather fail, in our old fashioned way, to see where the point comes in Surely a suicide a day for seventy eight days, in one city, is a matter for serious comment, and not for wishy-washy' moralizing" That depends on the point of view—the size of the city "A matter for serious comment" in Leicester, unquestionably In other places'—well, the quality, as well as the number, of the *personnel* might also be taken into the account (*abeat in media* Chicago)

Action of Iodin on the Temperature of Phthisical Patients—From clinical observations Cervello concludes that iodin, introduced either by the cutaneous or subcutaneous route, is capable of lowering the febrile temperature to normal He made use of Durante's solution pure iodin, 1 gram, iodid of potash, 10 grams, distilled water, 100 grams One cubic centimeter of this is injected daily Cervello attributes the action of the iodin to a double mechanism—as an antiferment and as a destroyer of the pathogenic agents by accelerating metamorphosis of their products It is possible that this agent may prove a curative measure in tuberculosis The author has only studied its antithermic action[1]

Treatment of Strangulated Hernia by Vaporization of Ether—Enssenbauer has again recommended Tinkelstein's method which often gives good results in cases of strangulated hernia The following is its mode of application the patient being placed in the horizontal position, the thighs and legs are flexed, the skin of the hernial region and, if necessary, that of the scrotum, or labia majora is lubricated with vaselin or olive oil, the hernial tumor is then sprinkled every ten minutes with one or two tablespoonsful of sulphuric ether In two or three hours the swelling decreases, its tension is reduced and very slight taxis will then cause the intestine to slip back It is successful in many cases, as the statistics of Enssenbauer and its author show It should be noted that while this method can be used in all cases it should be employed especially in those not of long standing, it is only likely to succeed in recent cases Again, no matter which method is used, if the strangulation is attended to promptly it can often be reduced without any operation

Wounds by the Cupro Nickelled Bullet of the Murata Rifle—Dr Dugald Christie of the Moukden Medical Mission reports to the *British Medical Journal* that at the battle of Ping Yang the Japanese were armed with their new Murata rifle and that the wounds among the Chinese indicated a missile of small caliber The jacketed Murata bullet is 315 inch in diameter, weighs 238 grains and has an initial velocity of 1,850 feet per second In most of the cases treated at Moukden the apertures were small, punctate and without contusion or laceration No pieces of clothing were carried in and there was no appreciable difference between the wounds of entrance and exit In several cases bones were cleanly perforated, without fracturing or splintering The explosive effects said to be produced by modern bullets of great velocity were not observed, nor did shock seem to be prominent Dr Christie concludes his report by stating that, judging from what has been seen and heard among the wounded at New Chang, one is naturally led to the conclusion that although the new bullet of small caliber and great velocity may wound a large number of men, it is less destructive in its effects in the tissues of the body and therefore less fatal than the older missile

The Wholesome and Unwholesome Ways of Canning Food Substances—A recent governmental report on canned goods by Dr H W Wiley is already out of print In that report he states That in Germany the law requires that the tins employed for holding canned goods shall not contain more than 1 per cent of lead, while in this country there is no restriction whatever in regard to the character of the tin used, the result of this latter fact being the employment of cans, in some cases, containing as high as 12 per cent of lead This practice prevails, notwithstanding the unanimity among physiologists as to the effect of lead salts upon the human system, the continual ingestion of even minute quantities of lead into the system, being followed, eventually, by the most serious consequences—painters' colic, lead palsy, and other trying diseases well known to physicians being the direct effects of continual exposure of the system to any such minute portions of lead salts It is said to be possible to exclude the latter by requiring that the tin shall not contain more than 1½ per cent of lead, also that the solder be as free from lead as possible In Germany, the solder made use of in sealing the cans is not allowed to contain over 10 per cent of lead, while in this country the analysis of numerous samples of the solder applied shows that it contains fully 50 per cent of lead—in addition to this being the lack of care to prevent such solder from coming into contact with the contents of the can and large surfaces of solder on the seams are often found exposed to the action of the acid contents of the can

The Utah Statute is Constitutional—The Supreme Court of Utah holds constitutional in a decision rendered March 16, 1895, in the case of People v Hasbrouck, the act of the Territorial Legislature entitled, "An Act to regulate the practice of medicine," approved March 10, 1892 It was attacked as violative of the constitutional provisions that the citizens of each State shall be entitled to all the privileges and immunities of citizens in the several States, in that graduates of respectable medical colleges who were at the time of the passage of the act engaged in actual practice of medicine in the Territory might be licensed without examination, and upon the payment of a fee of only $5, while citizens of a State or other Territory who were likewise graduates of respectable medical colleges but who were not engaged in actual practice in Utah at the time of the passage of the act, were not entitled to such privilege, but, in addition to presenting their diplomas and making proof of their identity, must also submit to an examination as to their qualifications to practice, and must pay a fee of $25 But the court holds that there is nothing here to invalidate the statute It also holds that the act is not unconstitutional on account of not directing any disposition of the fees to be collected, because it provides that they shall be paid into the treasury of the board created by it, and the act, by necessitating expense in its execution, in creating a board treasury, and providing an income, clearly implies a power to devote that income to the payment of necessary expenses The objection that the statute attempts to confer judicial power on the board constituted by it is also held not well founded, as are those objections which were raised with regard to the validity of the first appointments to the board

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[1] Arch di Farmac e Ther

Influence of Laparotomy on Tuberculous Peritonitis —Surgical intervention has profoundly modified the prognosis of tuberculous peritonitis within a comparatively short time From recent statistics of Roerset it seems that of 308 patients operated on 22 5 per cent examined one year after the operation were perfectly cured "We have cases cured for twenty-five years" (Spencer Wells) The cases were genuine tuberculosis in those of Buzy, Conitzer, *et al* The bacillary researches and inoculations were positive What is the process of cure? Stchegoleff, operating on dogs in Strauss's laboratory, concludes 1, tuberculous peritonitis of dogs may be cured by laparotomy alone, and at the beginning of the process, twelve to fifteen days after inoculation, 2, recovery is due to an inflammatory reaction characterized by infiltration of embryonal cells, the phagocytosis is the active development of connective tissue, 3, curative action seems due to a variety of physical agents—traumatism of the peritoneum, thermic influences, penetration of light and air into the peritoneal cavity, 4, the complete evacuation of the abdominal exudate is not the sole cause of recovery, 5, the dog is an animal somewhat feeble and very susceptible to tuberculosis if we use cultures of human tuberculosis[1]

Uterine Cancer Treated by Injections of Salicylic Acid.—Fasiousse has used salicylic acid successfully as a palliative in seven cases of inoperable uterine cancer in the form of injections as proposed in 1893 by Bernhardt The solution employed was 6 per cent in alcohol at 60 degrees, if this is left for any length of time the acid begins to recrystallize, so it should be placed for five minutes in hot water before using and should be kept in the dark The patients receive antiseptic douches two or three times daily before the injection, and one should immediately precede the latter, then from 1 to 4 cubic centimeters of the solution should be injected at five or six places in the locality involved, the syringe used is an ordinary Pravaz syringe with a long fine needle and the point should be inserted from 2 to 3 centimeters in depth according to the seat of the puncture and the amount of pain caused The vaginal portion is then dried, dusted with iodoform and tampons inserted soaked in glycerin and iodoform The patient is put to bed and stays there, in the evening the tampons are removed and a douche given, if the hemorrhage is very great the tampons are left in over night The first injections are usually followed by hemorrhages, sometimes rather extensive, but with repetition of the injections they become less frequent It is worthy of note that the hypodermic punctures rarely bleed In the majority of cases the injections are painful, but pain rapidly disappears No untoward sequelæ of any kind follow, and the treatment may be repeated as often as the gravity of the case and the patient's sufferings demand As results of the injections there are nearly complete cessation of the metrorrhagia, disappearance of the acrid fetid leucorrhea, diminished amount of pain, amelioration of the condition of the patient in general and retarded march of the disease[2]

Prophylaxis of Cystitis e Catheterizatione —Grosglik, seeking to explain the inability of physicians to combat vesical infection as a sequel of catheterization, remarks that the researches of Rovsing, Petit and Wasserman have demonstrated that the urethra is the seat of a quantity of microbes having the power to decompose urine During catheterization these microbes are carried to the bladder, hence the urethra is the first source of infection The researches of Petit and Wasserman having demonstrated the impossibility of disinfecting the urethra, the author concludes that at present we possess no sure means of protecting the bladder against infection by catheters, if this does not follow we are, judging by the present state of our knowledge, to regard it as chance merely From five cases of his own the author asserts that the prophylaxis of instrumental cystitis consists in the regular evacuation of the bladder, since he has established the fact that stagnant urine is most favorable for the development of cystitis after introduction of an instrument The following prophylactic measures are suggested by the author from his clinical study and the experimental researches of Rovsing and Guyon 1, the introduction of instruments into the bladder ought to be made under the most rigorous aseptic rules in order to prevent the penetration of germs from the exterior into the bladder, 2, the use of hard metallic instruments should be avoided as far as possible, for they may produce lesions of the vesical mucous membrane and thus favor microbic infection from the urethra, it is advisable to use Nelaton catheters—metallic instruments only in cases of necessity, 3, if there is retention the urine should be evacuated slowly and progressively, a sudden rapid emptying of the bladder may cause hyperemia of the mucous membrane, thus considerably favoring inoculation, 4, these manipulations should be repeated at intervals of not exceeding six hours, with reëstablishment of the vesical functions the intervals may be lengthened, 5, in all retention, even if transient, catheterization is to be repeated if the first is not followed by a spontaneous evacuation within six hours, 6, if for any reason the systematic evacuation of the bladder, as pointed out in 4, can not be carried out, we must use the catheter *a demeure*, which may be left in over night, or constantly, according to circumstances The very frequent use of this style of catheter in the author's cases shows him that it is a very efficacious means for combatting infection of the bladder, and he agrees with Legeu, who observes "The sound *a demeure* becomes in the hands of the physician an antiseptic *par excellence* of the urinary organs"[1]

An Aid to the Study of Epidemiology —We have received a pamphlet re-issue of Dr Shirley F Murphy's presidential address before the Epidemiological Society of Great Britain Dr Murphy is the medical officer for the County of London, and one of the editors of the best recent treatise on public hygiene He begins his address by pointing out the growth of epidemiologic research, in his country, that was rendered necessary by the cholera disasters of 1832 and 1849 Before those dates little encouragement existed in any country to attempt to draw any lessons from the materials theretofore collected England about that time began to perform its duty by instituting a system of registration of deaths and nosology—the pre-requisites to all exact epidemiologic study The Epidemiological Society was instituted about 1850 In 1860, Professor August Hirsch published the first volume of his notable treatise on the historico geography of pathology which was dedicated by him to that Society Of the merits of this work as an aid to the student of epidemics, Dr Murphy writes most heartily He says "Some years after our society was instituted, Professor Hirsch produced his admirable work on 'Geographical and Historical Pathology,' which he dedicated to the society *He states in his preface to the second* edition of this work that his task had been 'not merely to collect and reduce to order an almost unmanageable heap of materials—for the most part a *rudis indigestaque moles*—and to test critically their authenticity and fitness, but it more particularly involved the founding according to a design, and the building up according to a system, of a discipline which had been the subject of but little labor before, and had still to make good its right to a place among the medical sciences' Further, he felt himself able to claim that his first edition had 'given an impulse to the further cultivation of this field of medical knowledge,' and 'that the progress made within the last thirty years by this discipline with the decided influence on the course of etiologic inquiry, and the infusion into it of a more scientific character,' had been connected in no small degree with the publication of his book Professor Hirsch had, in fact, culled from all sources the material required for his purpose, he had digested this material, and had, so far as he could, apportioned to each statement the value which attached to it The reader of his book is thus able to appreciate the 'discipline' to which he refers The choice of this word by Dr Creighton, who has thus translated Professor Hirsch's own word *Doctrin*, is excellent, for it embodies the very essential of epidemiologic inquiry Professor Hirsch has necessarily been obliged to rely very much upon the observations of others in the preparation of his work He groups the subject matter which he thus collects under certain well defined headings, he gives such account as he can of the past history of the disease, he discusses at length its geographical distribution in our own times, he contrasts the peculiarities of epidemics of the disease under consideration with those of other diseases, the influence of seasons and weather is especially dwelt upon The influence of soil, the difference in the type of the disease at one time and at another time, the nature of the virus, and the method of its diffusion, are all subjects he discusses separately He has shown (to use his own words), a design, a discipline, which must be followed by the student of epidemiology"

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[1] Arch de Med Exper
[2] Les Nouveaux Remedes

[1] Arch Gen de Med

Lessened Prevalence of Sickness in the French Army—From *Le Temps* of April 12, last, we abstract an article of interest to the profession at large as well as to military surgeons It is the report of General Zurlinden, Minister of War, to the President of the French Republic on the improvement of the sick rates of the Army The General begins by recalling that in the reports published in 1889–92, M de Freycinet outlined the principal causes of sickness in the Army and the measures taken by the Medical Department, the *Service de Santé*, to remedy them The reports showed that typhoid fever which prior to 1887 had attacked 8 000 men annually, became reduced 36 per cent in 1890 and 49 per cent in 1891, that in the Military Department of Paris this reduction amounted to as much as 75 per cent, and that everywhere the lowering of the typhoid rate followed promptly on the substitution of filtered water for that of rivers or wells formerly used If the principles which led to the adoption of this prophylactic measure are sound, General Zurlinden argues that we should expect a continued reduction in the typhoid rate and that the ravages of the fever would be found restricted to garrisons as yet unsupplied with pure water or to those where the purity of the supply had been impaired by accidental inflow or defective filtration The measures which brought about the reduction of the rate have been continued, and the cases which numbered 7,771 with 964 deaths, in 1886 and which even in 1892 amounted to 4,820 with 739 deaths, became reduced in 1894 to 3,060 with 530 deaths The report then calls attention to the facts as reported from certain garrisons In the Military Department of Paris the cases increased from 824 in 1888 to 1,179 in 1889, but after that, when the water of the Vanne had been substituted for that of the Seine, the annual number of cases was reduced to 299, 276, 293 and 258 Early in 1894 the Vanne became contaminated accidentally, 810 cases corresponded with this impurity during the months of February, March and April, but the year as a whole gave only 436 cases In some towns the fever was eradicated by a supply of filtered water At Beauvais, where for three consecutive years there had been 20, 96 and 72 cases of fever, the introduction of pure water in 1891 was followed by the lowering of the typhoid figures to 2, 9, 8 and 5 in each of the succeeding years The Auxerre epidemic, which in 1892 affected 29 men, led to the use of filtered water, only one case was reported from this garrison in 1893, and one in 1894 At Cherbourg, where in 1888 and 1889 the cases numbered 110 and 119, filters were introduced in 1890 and the typhoid morbidity fell successively to 21, 8, 11, 8 and 8 cases The experience of the garrison of Dinan should not be omitted In three years 835 cases were reported, but since the filtration of the water supply the annual number of cases has fallen to 1, 2, 3 and 1 The endemicity of typhoid fever at Lorient was affirmed from year to year—in 1888 and 1889 170 and 171 cases, but filters were placed in the barracks in 1890, and since then their operation has been superintended with so much care that the typhoid figures fell to 68, 2, 2 and 1 in 1890–93 In 1894, 11 cases followed the accidental use of a new source of supply which was found to be exposed to contaminating agencies and was thereupon immediately condemned Meanwhile typhoid fever continued epidemic among the surrounding civil population, and it should be stated also that while this population was so cruelly visited during the cholera epidemic of 1893 the garrison had but a single case, and this an imported one At Melun the cases of typhoid fever fell from 122 in 1889, when Chamberland filters were introduced, to 16, 6, 2, 7 and 7 It has been established clearly that the recent epidemic which attacked 28 dragoons while sparing completely the battalion of infantry quartered in the barracks with them, was due solely to the use of Seine water from the stables As the filters were frozen the troops should have drank only the regulation tea, the infantry having obeyed orders in this regard were preserved from attack

Similar instances of lessened prevalence of typhoid fever are given from other garrisons and corps, after which the Minister sums up as follows The figures 7,771 and 3,060 represent, from 1886 to 1894 inclusive for the whole of the garrisons of France the constant and progressive diminution in the prevalence of typhoid fever, the mean annual number of fatal cases which prior to 1888 was 843 fell in 1888–91 to 590, the number for 1894 530, being considerably below the mean of these years It may thus be affirmed that these hygienic measures have in five years preserved to France 1,265 of her soldiers The further we progress in exact research into the causes of the isolated cases that occur, the more convinced we become that soldiers who are furnished with pure water in their barracks are not on this account less exposed to the germs of typhoid fever in the liquor and other stores, restaurants, etc which they frequent In the garrison at Nantes, where filtration has reduced typhoid fever from the state of epidemic prevalence which formerly obtained, it is found that the 17 cases observed in 1893 and the 30 reported in 1894 were mostly among ordnance soldiers who took their meals at restaurants where the water was evidently contaminated by cesspools Similar observations were made at St Germain, at Blois at Mauberge, etc, and these furnish the most plausible explanation of the occurrence of sporadic cases which for an army of 450 000 men constitute a considerable total in the absence of any epidemic Nor does it seem likely that we will ever be able to prevent such cases

The diminished sickness so marked in the records of typhoid fever, has unhappily not been extended in the same proportion to dysentery, that other scourge of armies in garrison and campaigns Not that the mortality from this disease has been disastrous nor even considerable, since it amounted to only 73, 117, 74, 60, 96 and 88 in the six years 1888–93 inclusive, when the cases were respectively 2,953, 3,870, 3 451, 2,843, 5 580 and 4,950 In 1894 there were 77 deaths among 3,800 attacked, a diminution in the number of cases amounting to about 1,000 per year from 1892 In the comparative freedom of the garrisons from cholera in 1893 and 1894 the Minister finds another confirmation of the practical value of hygienic measures I have cited above, he says, the town of Lorient, where the garrison was unaffected At Marseilles there were only 19 cases and 3 deaths, and at Brest only 2 cases in the midst of a seriously affected civil population Measles and scarlet fever have been increasing since 1887 to 1894, the former from 4,893 cases to 5,428, the latter from 1,621 to 2,984 Concerning influenza it is said The general manifestations of la grippe will unhappily, as in 1890 and 1891, increase the figure of the mortality of the Army for 1895 as well as that of the civil population of all ages, and this is a danger that military medical officers hereafter ought to foresee, as in the case of cerebro-spinal meningitis, of cholera and of diphtheria The progressive increase in the epidemic attacks of the last mentioned disease is alarming At one time rare, even to the sporadic condition among adults, it attacked in 1888, 422 soldiers, in 1889, 441, in 1890, 434, which figure rose abruptly in 1891 to 679 falling in 1892 to 463, and rising again in 1893 to 663 The mortality for these years is expressed by the numbers 41, 25, 64, 84, 57 and 64 Happily the disease was less prevalent in 1894, as only 344 cases and 45 deaths were recorded The admirable discovery of M Roux, the application of which has been assured to the sick of the Army, will not only lessen the chances of death and multiply cures, but by the rapid neutralization of the germs the contagion of the disease will be restricted

Medical directors and surgeons-in-chief of hospitals and army corps have been charged to keep convalescents from infectious diseases such as typhoid fever, dysentery, the eruptive fevers, influenza, etc, in hospital until all risk of relapse is passed, that their friends and neighbors may be efficiently protected from contagion

The death rate of the Army is about 6 20 per 1,000 living, while the death rate in civil life among men of the military age is 11 per 1,000

Society Notes

The Sioux City (Iowa) Medical Society held its annual meeting May 15 The following officers were elected for the ensuing year President, R D Clarke, M D, Vice-President, Van Buren Knott, M D, Treasurer, A C Bergen, M D, Secretary, W J White, M D There will be a special meeting of the society June 5——At the annual meeting of the Onondaga Medical Society, held in Syracuse, N Y, May 14, the following officers were elected for the ensuing year President, F W Slocum, M D, Vice-President, D H Murray, M D, Secretary, Edward Wynkoop——The annual meeting of the Rensselaer County (N Y) Medical Society was held in Troy, May 14 The following officers were elected for the ensuing year President, R B Bontecou, M D, Vice President, J A Cipperly, M D, Secretary, H B Burton, M D——The semi-annual meeting of the Miami Medical Society was held in Cincinnati, May 16 The following officers were elected for the ensuing year President, J A Thompson, M D, Vice-President, G L Kreiger, M D, Secretary, C W Gatch, M D

Philadelphia Notes

Jefferson Medical College—The sixty-ninth annual Commencement of this College was held in this city on the 15th inst, the Address being delivered by Prof James C Wilson The class numbered 148, and it is said that about one-fourth of the entire graduating class were "plucked" at the examination, consequently did not participate in the subsequent proceedings This may be taken as a compliment to the State Board of Medical Examiners and Licensers During this Commencement the College conferred the title of Doctor of Laws upon Dr Collins Warren, of Boston, Mass

Alumni Association Jefferson Medical College—At the banquet of the Alumni Association, given at the Hotel Bellevue May 14, Dr E E Montgomery, the newly elected President occupied the Chair Among the guests was Dr R Beverly Cole, of San Francisco It was the largest banquet ever held by this association, covers being laid for 175 In an after dinner speech it was announced by a member of the Board of Trustees, that in addition to the four year course, another great reform had been decided upon which is to go into effect this summer, it being the funding of all receipts and the paying of salaries to the faculty It is even probable that the services of the clinical professors may receive some pecuniary acknowledgment in the near future

The Municipal Bacteriologic Laboratory under the direction of Dr Bolden, was opened to the public May 20 in the City Hall

The Medico-Chirurgical College held its annual Commencement May 10, graduating a class of fifty-nine The address was delivered by Prof W Frank Haehnlin

Dr W Late Coplin, who has for several years been teaching pathology in the Jefferson Medical College, has accepted a chair in the faculty of the Vanderbilt University at Nashville, Tenn, as professor of pathology.

County Medical Society—At the meeting of the County Medical Society last week, Dr F B Turck, of Chicago, by invitation of the directors, exhibited some of his new instruments for examining and treating diseases of the stomach

Dr Christian Fenger—Before the Section on Surgery of the College of Physicians, May 10, 1895, Dr Christian Fenger, of Chicago, by invitation, gave a very interesting and valuable lecture on "Conservative Surgery of the Kidney and Ureter *versus* Nephrectomy" Drs Joseph Ransohoff and R B Hall, of Cincinnati, and Deaver Barton, Allis, Willard, Keen and Roberts, of Philadelphia, took part in the discussion A vote of thanks was tendered Dr Fenger for his very instructive remarks At the same meeting Dr Thomas S K Morton exhibited a case of femoral aneurysm cured by trans peritoneal ligation of the external iliac artery, also a case of popliteal aneurysm cured by ligation of the femoral artery

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army from May 11, 1895 to May 17, 1895

Major William E Waters, Surgeon U S A, is granted leave of absence for one month and fifteen days, to take effect on or about June 16, 1895

Major Washington Matthews, Surgeon extension of leave of absence granted on surgeon's certificate of disability, is further extended four months on surgeon's certificate of disability

Major William C Shannon Surgeon, upon the expiration of his present leave, is ordered to Ft Custer for duty

First Lieut Deane C Howard Asst Surgeon, will be relieved from duty at Ft Snelling, Minn, upon the arrival there of Major Charles B Byrne, Surgeon and will then proceed to Ft Custer, Mont, and report for duty at that post

Capt Alonzo R Chapin, Asst Surgeon, having been found by an Army retiring board incapacitated for active service, on account of disability incident to the service is by direction of the President retired from active service this date, May 10 1895

Capt William J Wakeman, Asst Surgeon U S A is granted leave of absence for four months, to take effect on being relieved from duty at Ft Thomas, Ky

Capt Charles Richard, Asst Surgeon will when relieved from duty at the Military Prison Ft Leavenworth, Kan, proceed to and take station at St Louis Mo, for duty as attending surgeon and examiner of recruits

Capt Peter R Egan Asst Surgeon, is relieved from duty at Ft Custer, Mont and ordered to Ft Assiniboine, Mont for duty, relieving Major Charles B Byrne, Asst Surgeon Major Byrne, on being thus relieved, is ordered to Ft Snelling, Minn for duty

Marine-Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the fifteen days ended May 15, 1895

Surgeon W A Wheeler detailed as chairman of board for physical examination of applicant for appointment in revenue cutter service, May 13, 1895

P A Surgeon J H White, detailed as recorder of board for physical examination of applicant for appointment in revenue cutter service, May 13 1895

P A. Surgeon R M Carrington, granted leave of absence for fourteen days May 4, 1895

P A Surgeon J O Cobb, granted leave of absence for fourteen days, May 1 1895

LETTERS RECEIVED

Atkinson, Wm B (2) Philadelphia, Pa, Alma Sanitarium, Alma, Mich American Radiator Co, Chicago, Ill Ashmead, A. S, New York.

Black J E., Memphis, Tenn Baker, Henry B, Lansing, Mich, Bell, Clark, New York, N Y Barr, G W, Keokuk Iowa

Cooper, W G Atlanta, Ga Coe, H W, Portland, Ore Cohen, S Solis Philadelphia, Pa. Cooper E H, Galesburg, Ill Cobleigh E A, Chattanooga Tenn, Coman, L Z Boulder, Colo

Dight, C F, New Orleans La Drevet Mnfg Co, New York N Y

Field, A G, Des Moines Iowa Faroy, C E, Omaha Neb Fisher, S B, Springfield, Mass Frazee, Geo L Ann Arbor, Mich

Gilman H A, Mt Pleasant Iowa Gikel, W B Toronto Ont

Hubbell Alvin A, Buffalo N Y Hansell, Wm, Ottumwa, Iowa Hanson, H C (2) Sparta, Wis, Heath, W P St Louis, Mo Herald Bindery Dubuque, Iowa Hummel, A L Philadelphia Pa

Kuh, Edwin J Chicago Ill Kyle D Braden, Philadelphia Pa, Kleene F, Chicago Ill Kellogg J H Battle Creek, Mich Kennedy, Samuel, Shelbyville, Ind Kirkbride, M F (2), Philadelphia, Pa

Linney John J, Baltimore, Lyford, W H Port Byron, Ill

Magruder, G L Washington, D C Mettler, L H, Chicago Ill Malsbury G E (2) Cincinnati Ohio Miller, C J, Whitewater, Wis Maclean, Donald, Detroit Mich Murphy, J B, Chicago, Ill

Noyes, W B, New York, N Y Nash H M, Norfolk Va

Ozone Company, Chicago, Ill Orr, Jr, Wm, P, Lewes, Del

Pennington R J, Chicago Papold Co, New Brunswick, N J Penny T Herbert, Baltimore Md *Post Graduate Medical School* Chicago, Ill Perry A W, San Francisco, Cal

Rohé, G H Baltimore, Md Rogers, H.R, Dunkirk, N Y, Rosenberger J L, Chicago Ill

Scheiffelin W H, New York N Y Smart Chas Washington, D C, Stover, W H, Bravo, Mich, Sayre, R H, New York, N Y, Stockley, D R. Evanston Ill

Uran B F, Kankakee Ill

Wyckoff R M, Brooklyn, N Y Williams I J Philadelphia Pa, Wells E F Chicago Woodbury, Frank, Philadelphia, Pa Wingate, U O B., Milwaukee, Wis, Willard, Lee M, Merrill, Wis Walsh Ralph Washington, D C Warner W R & Co, Philadelphia, Pa. Whetzel F F, Milwaukee, Wis; Williamson, A N, New London, Conn

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ADDRESSES

ADDRESS ON STATE MEDICINE

Delivered at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY HENRY D HOLTON, A M, M D
BRATTLEBORO, VT

Mr President, Members of the American Medical Association —Hygiene is as old as the profession of medicine But "State Medicine" is of comparatively recent origin We find the leader of Israel promulgating sanitary regulations for his people that can hardly be improved to day Greeks and Romans honored the sanitarian and gave much time to the study of subjects connected with matters pertaining to public health Pure air, pure water were deemed by them to be a great desideratum The Aztec erected aqueducts to supply the City of Mexico with pure water long before Columbus sailed from Palos But amid the wreck of the Dark Ages the little that had been taught regarding the necessities of hygiene to public health was buried, and only in the last sixty years has its resurrection and reestablishment upon a firm and more enduring basis been attempted The early pioneers of our profession in this country were alive to the importance of hygiene, especially was this true of the Sydenham of America, Dr Benjamin Rush With the pressure resting on him of the multitudinous and arduous duties of practitioner in hospital and family, as statesman, lecturer and author he found time to investigate and write upon epidemic diseases in a way that showed the most accurate observation and current discrimination of facts bearing upon sanitary science His work in this direction was recognized all over the world and caused the Czar of Russia to present him with a diamond ring, as a token of appreciation for the valuable service rendered the world by his observations Yet the profession of America have so far failed to avail themselves of the high privilege accorded them to contribute a sufficient sum to erect a suitable monument to commemorate the virtues, statesmanship and professional ability of this first American sanitarian May we not hope the movement inaugurated yesterday for immediately raising the necessary funds will be carried to a successful issue, so that in the near future we shall see the consummation of this most desirable work? Following in the wake of this early and eminent sanitarian, zealous workers in our profession, earnest men from other walks in life filled with philanthropic desire to improve the status of their fellows, have worked together to diffuse the knowledge they have gained by careful research among the people until our whole nation is permeated with the leaven of preventable medicine—and although it has been generally conceded that the people by their representatives have the right to enact laws which will protect them as individuals or as communities against all influences which are harmful to the person property or health of the individual *separately, or collectively as a community* yet it was nearly thirty years after the pioneers in this work attempted to improve the hygienic status of the poor in some of the manufacturing parts of the larger English towns, before the first State Board of Health was established by act of legislation in this country, that of Massachusetts

So luminous was her example and so active thorough and faithful in their teachings were the missionaries of this gospel of cleanliness and prevention that now every State in the Union, except three have their Health Department established by legislative act, each of which is doing its own peculiar work diffusing to a greater or less extent in their respective States a knowledge of personal hygiene, and exercising the powers delegated to them to prevent the spread of epidemic and contagious diseases, with the result that the citizen finds himself less liable to the contagion of pestilential disease, and with a prospect of added years to his average of life I desire to call your attention to the great and good work these State Boards have done and to commend them for their enthusiasm, their patience and their perseverance in the varied and often delicate duties which have devolved upon them

Not in every instance have they been composed of men familiar with the rudiments of sanitation, but too often political considerations have entered into the choice that an executive has made This can not be too severely condemned, and an enlightened public are demanding that these boards shall be composed of experts thoroughly trained by education and experience in the best and latest sanitary knowledge, and the methods of applied hygiene But the best of those boards have at times felt that the inadequate pecuniary provisions which have been made for work by even the most liberal Legislatures have hampered them in so many ways that the results of their labors have fallen far short of what they might and ought to have been, not alone for the sake of science itself, but for the best and highest welfare of the States themselves

It is the part of wisdom and good statesmanship that in each State the militia should be equipped and drilled for service as conservators of domestic peace, and as a reliance for protection from a possible foreign invasion It is interesting and stirs one's patriotism to observe with what alacrity and unanimity, legislators vote generous appropriations for these purposes How painful the contrast when asked for a comparative pittance for carrying out measures to protect the same people from the invasion of an army of microbes which threaten more lives than the invading army of any foreign foe My own State spending annually $20,000 more upon its one regiment of National Guards than upon its Health Department, and the great and good Commonwealth of Massachusetts, pioneer in sanitary science as she has been in so much that has been for the benefit of humanity and the advance of our higher civilization, appropriates annually $187,000 more for maintaining her efficient military establishment than for her Board of Health. New York, the Empire State, with its large port of entry, and consequently its especial liability to invasion by any and all forms of pestilence, appropriates nearly $800,000 more for its splendid military department than for its health organization. These will suffice as examples of all the other States. The explanation of all this is not a difficult task; it is summed up in the state of "public opinion." The masses are pleased with, and have no criticism for, expenditures made for the gay trappings, the brilliant equipments, the pomp and grand display of their martial hosts. On the other hand, this same public, while they have become so far enlightened as to believe that some provision is necessary for their protection "from the pestilence that walketh in darkness and the destruction that wasteth at noonday," yet they do not appreciate the quiet, unostentatious work which is done in the laboratory and the quiet methods used to prevent the spread of different epidemics. These State Boards have had their efforts cramped and much circumscribed, as a result of State lines and a want of coöperation with the boards of other States, and this leads us to consider the necessity and desirability of a National Board of Health presided over by a Secretary of Public Health. It seems hardly worth while to discuss in this presence either the necessity or desirability of a National Health Bureau, when we recall that upon more than one occasion this ASSOCIATION has by unanimous vote put itself on record as being most thoroughly in favor of national sanitary supervision. We know, however, that all progress and especially innovations in the habits and methods of discharging national duties, are only brought about by "agitation", we would therefore stir up your minds and hearts on this subject, not only as an ASSOCIATION but as individual workers, believing that if you all become thoroughly aroused to the great importance of this matter and put into its agitation at home the earnest work which you do into those things that you make mount the stairs of success, we shall not be discussing the desirability of this Bureau, but shall at our next meeting be rejoicing over the accomplishment of our purpose and the fulfillment of our desire. The bill introduced by Mr. Gray into the last Congress and known as Senate Bill 1840 was, I believe a child of this ASSOCIATION; it was a good measure and ought to have become a law. But, alas! it came to an untimely death in the hands of the Committee on Epidemic Diseases. It was prepared and presented as were many other worthy measures, with enthusiastic hopes that the LIII Congress would rise to its high privilege, and embrace the great opportunities that presented themselves for beneficent and practical legislation. But those hopes were

> "Like Dead Sea fruit that tempts the eye,
> But turns to ashes on the lips."

Before this bill is introduced into the LIV Congress, it would be wise, we believe, to amend it, by providing for an advisory board of one member from each State, from the Medical Corps of the Army, Navy and Marine Hospital Service. This would render it more practical and more popular. This advisory board would only meet on the call of the Secretary of Public Health, and would discuss and advise upon such questions as he might propose. They would be his correspondents in different parts of the country, and would be required to render such service as he might demand. In order, however, to secure the passage of any bill it will be necessary to educate the press and through them the people and their representatives in Congress. This can be best done by the members of this ASSOCIATION, each in his own State. The facts that demand attention are numerous and convincing, and it would seem that they need only to be presented to carry conviction to the mind of the ordinary person. Let the attention of congressmen be called to the records of the War Department, which show that during our Civil War the number killed in battle and of deaths from wounds was 93,443; the deaths from preventable diseases were 108,666. If to this vast number who perished, we add those who were disabled and broken in health by the infliction of preventable diseases that did not kill, as instance the 1,700,000 cases of diarrheal diseases, and we have the startling fact that no foe which could give us battle would decimate the active population of the country like the preventable diseases. At the same time, millions upon millions are appropriated, and rightly too, to give the nation a Navy that will protect us from attacks of foreign armies, but only a few paltry thousands to protect our nation from the greater scourge of preventable disease.

If we desire and expect to obtain satisfactory legislation, either by the enactment into law of this or any other bill, this ASSOCIATION should not only appoint a committee familiar with the subject and its requirements, who are able to present to the congressional committee to whom it is referred, and to other members of Congress the reason for asking and the results reasonably to be expected from such legislation, but a committee who will stand as sponsors for the bill, to see that it is not unduly delayed or entirely smothered in committee. Any one who has had any experience with legislation, knows that unless a bill is known to have behind it some responsible party, who is earnestly watching its fate, that it is very likely to be forgotten and superseded by some measure that has a friend to watch its interests. The ASSOCIATION should further show its earnestness in this matter by making an appropriation from its funds of such a sum as will pay all reasonable expense incurred.

The subjects which would present themselves for study, investigation and regulation to this National Health Bureau are so numerous that we can only call attention to a few of them. It may be true, as suggested in a recent work on degeneration by Nordau, that we are living in an age when degenerates are to the front, forming public opinion and educating the masses by a literature which emanates from the brain of a degenerate, who is so well described by this author as a person who "finds it easier and more convenient to allow his brain *centers to produce* semi-lucid, nebulously blurred ideas and inchoate embryonic thoughts, and to surrender himself to the perpetual obfuscation of a boundless, aimless and shoreless stream of fugitive ideas; who rarely arouses himself to the painful attempt to check or counteract the capricious and, as a rule, purely mechanical associations of ideas and succession of images, or brings under discipline the disorderly tumult of his fluid presentations. On the contrary, he rejoices in his faculty of imagination, which he contrasts with the insipidity of the Philistines, and devotes himself with predilection to all sorts of unlicensed pursuits permitted by the unshackled vagabondage of his mind, while he can not endure well ordered civil occupations requiring attention and constant heed to reality " If it is further true, as is claimed, that the number of these degenerates in this country are being rapidly increased in number by reason of the use of narcotics and stimulants, of tainted, adulterated or contaminated foods, the absorption of organic poisons, the sapping of vitality by the constant nervous excitement under which we live, is it not time that there should be some authoritative branch of the government, to inquire into the causes of this degeneracy and advise some means of staying the tide of national destruction?

It is certain that the safety and welfare of the people of this country, and the interests of commerce, demand the establishment of a uniform system of quarantine, under the control of the Federal Government It has been well said that in times of danger it is of equal concern to the entire country—to the people of the interior States as well as those on the seaboard—that quarantine should be national in character It is not just to throw the expense and responsibility of the defense upon any one class of the State, nor is it just to deprive those living in an interior State, from a voice as to the method and degree of protection along the seaboards and frontiers Furthermore, to render all lines of defense effective, every point must be fortified when the invasion of disease is threatened or possible Neither is it wise or safe to trust the defenses to chance or to a quarantine system varying at different points, as now exists under the separate regulations of the various States While safety should be secured, as little interference and inconvenience with commerce and individuals should be allowed as possible

The efficient Health Officer of Canada has well said, "that from the long period of incubation of some of the infectious diseases and the relative shortness of the voyage from many ports outside the country, and from the possibility of disease lurking in imported clothing and effects, it is evident that unless there could be a routine quarantine detention of all vessels arriving at every port and a routine disinfection of all clothing and merchandise from abroad, there is always the possibility of exotic disease passing the quarantine barriers in an invisible and unrecognizable stage and condition, and first declaring itself in the interior of the country This can not be avoided without such detention of vessels, passengers and merchandise at the ports of arrival, and such consequent interference with trade and commerce as would be quite unjustifiable and impracticable " Hence the necessity of a central, harmonizing, governing board to bring into cooperation the various local Health Boards—and at the same time to secure the necessary coöperation of all foreign nations, in fact, the adoption, in some form, of the recommendation made at the meeting of the National Quarantine and Sanitary Association by a committee of which our venerable associate, Dr A N Bell was chairman "That of the adoption, by the commercial nations, of a sound and well-digested code of marine hygiene, and of the necessary measures for insuring its strict enforcement " While we would urge with all zeal the necessity of national quarantine, we would hold in grateful remembrance the work of local boards in our large ports of entry, and the able and thorough efforts in this direction of the Marine Hospital Service But we must bear in mind that this service was rendered in default of any national organization that could do this work

We recognize how much of our safety depends upon the thoroughness with which proper quarantine regulations are enforced by the sanitary authorities of Canada It is a pleasure to speak with some personal knowledge of the faithful and painstaking work done in the Dominion under the watchful care of the Medical Superintendent of Canadian Quarantine Service, Dr Frederick Montizambert By this efficient service the danger of imported diseases from this source is infinitesimal

Standing as we do on the verge of the centennial of the first successful demonstration of secured immunity from disease, by the use of an antitoxin, it is pertinent for us to inquire if we are in the light of our present scientific knowledge, carrying out carefully and faithfully, vaccination, as Jenner gave it to us It only requires the announcement that small pox has appeared in any community, to learn how large is the number of adults who have never been vaccinated, not because of any objection to vaccination, but from neglect in having their attention called to it Could we honor the memory of Jenner, and celebrate the discovery of this great boon he gave to the world, in a more fitting manner than by seeing to it that in all the families we enter, this royal deliverance from a most loathsome disease is placed at their disposal? It is unnecessary to discuss before this body the usefulness, the desirableness, the imperative necessity of this wonderful protection to the human family Each year of the century has demonstrated it Millions of people have testified to its beneficent powers In this country, and in most of the countries on the continent, animal lymph is used in preference to humanized England is now adopting it in some measure, but the Jennerian method of arm-to arm vaccination has had so strong a hold that it has been slow in adopting the use of bovine lymph

In nearly all foreign countries the production and distribution of calf lymph is under control of the government, in this country, however, only two States maintain vaccine establishments for the propagation of vaccine lymph The general government does nothing at all As a result we have the production and distribution of lymph in the hands of commercial men Dr Abbott remarks that, "the private producer conducts his operations in such a manner as to secure the greatest possible returns with the least possible outlay of money Vaccine lymph is bought and sold, and competition in prices naturally leads to deterioration in the quality of this important article, which should be freed from every influence which may in any way lead to its impairment " But the danger lies not only in the fact that it is an article of commerce, but still more in the methods of its sale Druggists and middlemen act as agents for its sale, as a consequence this vaccine lymph often remains for weeks or months in the drawers of these agents, and when needed for use the guarantee of the producer is disregarded, the lymph of several weeks or months ago is sold, and finally used for vaccination As a result it proves inert, and the consequence is charged to the insusceptibility of the infant or vaccinated person

As a matter of fact, when vaccination is conducted under the best conditions of fresh lymph, insusceptibility is found not to exist, or to be a matter of rare occurrence If such vaccinations are being made during a brisk epidemic of smallpox, and in families which have been exposed to the disease, it may happen that some children will take the disease and die, during the delay occasioned by waiting to ascertain whether the lymph of uncertain source and age will prove successful or not, and thus life is jeopardized and the practice of vaccination falls into disrepute Again, the commercial producer is very likely, in his haste to become rich, to take less time and to become careless in his technique—in consequence the lymph becomes contaminated with foreign microbes which may produce either abscess, septicemia, or other pathologic states For these reasons we would urge that a most imperative demand exists for the establishment of a National Health Bureau, one duty of which would be to produce a pure vaccine lymph under the most careful aseptic conditions and furnish it to State Boards free or at cost

It is a serious question if the time has not arrived when the medical profession should study from a purely scientific standpoint the great practical question of the effects of alcohol as a beverage

Dr Crothers, in an address before the Public Health Association, asserted that, "Inebriety is clearly more prominent as a cause of disease and degeneration than all other factors known at present The various authorities who have tried to tabulate the number of defectives due directly and indirectly to inebriety, have varied widely in their estimates, showing that the facts are not yet all grouped and studied These estimates have placed inebriety as the active cause of from 10 to 60 per cent of all insanity, from 30 to 80 per cent of all pauperism, from 60 to 90 per cent of all criminality, and 30 per cent of all idiocy These are the highest and lowest estimates made by various authorities in this country and Europe, and bring unmistakable evidence of the influence of inebriety, not only over public health, but over all growth and civilization " Here is a subject for investigation in which our profession should, as guardians of the public health and as conservators of the country's good, take the lead, and not trail in the rear of public opinion as we are now doing It is not only our privilege, but our duty, as members of the only profession who by training and experience are prepared to enter upon a thorough scientific study of the questions which it involves If scientific workers in the medical profession, with the authority of this ASSOCIATION, should examine this question from a purely scientific and practical standpoint, taking facts and not theory as a basis, we should soon be in possession of accumulated knowledge which would enable the medical profession to speak with authority upon a problem which has been agitated and considered from other standpoints, without being able to lay down positive and incontrovertible propositions as to its effects, and the best means to remedy the various resultant conditions It is true that for many years a committee of the British Medical Association have had the subject under consideration and, in connection with the British Social Science and Public Health Associations, have done much to place this question upon a scientific basis, and have furnished data from which an effort has been made to restrict and alleviate the various phases of trouble that have resulted from its general use Yet as diseases in general are modified or intensified and their sequelæ changed by climate and environment, in how much larger measure shall we find that the effects of alcohol are different in our climate, with our natural characteristics and the different forms or methods of using it Let a National Bureau of Health take this matter in charge, and pursue an exhaustive investigation upon the lines indicated, calling to their aid and utilizing the work done by committees of this and other organizations, and it would soon be in possession of positive facts with which to elucidate this great problem

At the present time the whole world is roused and stands with bated breath listening for the scientist to announce the discovery of a new therapeutic or preventative serum It is believed that we are possessed of a serum or antitoxin by which the mortality of diphtheria is apparently very much reduced, while we are in the stage of demonstration of the effects of this serum in preventing and curing this disease, it is necessary that we should exercise great care in securing fresh reliable antitoxin, and caution in its use, In this matter we are again indebted to Massachusetts for an example of what the general government should do, prepare under suitable conditions the antitoxin of undoubted purity and supply, under proper regulations, free to such communities as might desire it Investigating experimentation is going on in many laboratories which promises to give us other valuable curative and preventative serums. Although disappointed in the curative value of tuberculin it has proved of great value in the diagnosis of bovine tuberculosis In the older States, where great attention has been given to dairy interests, every method has been adopted that would in any way increase the product of milk, regardless of the health of the animal, as a result, we have under these conditions what is practically unknown on the prairies of the West, a corresponding increase in diseases affecting the dairy cow, the principal one being tuberculosis

James Law in a report on tuberculosis remarked: "Few, if any, diseases maintain a sway over a more numerous genera of animals than tuberculosis All must, therefore, be considered as possible bearers and disseminators of the infection, and no such animal can be left out of account in any systematic attempt to root out the disease Some are, however, justly held to contribute more than others to the maintenance of the affection and in this sense, in addition to man himself, we must consider as preeminently bearers of this disease cattle, fowls and pigs It is doubtful if any observation or study has been sufficiently thorough to enable any one to make an accurate table of the prevalence of this disease among the cattle of this country As already indicated it is hardly known in the West, as in over two million beeves examined in the packing centers it was present in only two tenths of 1 per cent, while in cows in this city (Baltimore) 2½ to 3½ per cent showed its presence, and in at least twenty thousand examined in the State of New York it was present in nearly 2 per cent In Massachusetts it was present in 7 per cent During the last five years various investigators have been at work upon this subject, and have arrived at conclusions more or less correct regarding some of its phases These conclusions are of a most startling character and certainly demand and are receiving at the hands of the profession most serious consideration, among the laity these decisions have produced a state of great alarm and an apprehension of danger from the use of dairy products as well as meat Time will not permit us to enter upon a full discussion of this subject, we may, however, briefly consider some of the conclusions arrived at after a careful and thorough clinical study, as well as biologic experiments, post-mortem examinations and microscopic investigations of the flesh and milk of a large number of animals Dr P H Bryce, Secretary of the Provincial Board of Health, Toronto, having made a most careful study presents the following deductions

1 That tubercular infection has existed in greater or less degree in man, according to post-mortem evidence in a percentage, in some groups of cases, to the extent of from 25 to 50 per cent

2 That it produces fatal results at different life periods after the first year to an almost equal degree

3 That the tubercular process, fatal in so large a degree, may nevertheless exist in man and in animals, according to the localization, condition and extent of the tubercle, the constitution of the individual, the environment, as of climate, etc, for an indefinite length of time, the individual finally dying from other disease

4 That the infection may, however, be present in such instances to an extent sufficient to transmit the disease through the air passages, and possibly in cattle through the medium of the milk

5 That in many cases the disease may remain in an inactive condition, the man continuing in a fair condition of health, and being able to pursue his ordinary avocation, and the cow appearing well nourished and giving milk in apparently normal quantities, but that in all such cases there is an ever present danger of cold, or other occasion of inflammation setting up general infection of the system with fatal results

6 That the seat of the disease will largely determine the degree of danger of infection and the direction of its transmission

7 That in cattle, while the bacilli are probably always present in the milk when the udder is tubercular, yet the bacilli may be present in the milk in a considerable percentage of cases where even post-mortem examination reveals no tubercles of the udder

8 That in woman, tuberculosis of the mamma is but seldom found

9 That in cases where tubercle is present in lymphatic glands, in lungs, liver and other organs, the juice of the muscles has been found in some instances to produce infection, even where no tubercle of muscular tissue could be discovered

9a That the inoculation of either men or cattle, when not experimental, takes place in practice always by way either of the respiratory or of the alimentary tract

10 That such inoculation is dependent upon the extent and frequency of the passage of infective materials into either tract, and largely upon the receptive condition of the mucous membrane in both cases A healthy mucous membrane offers much resistance to the passage of bacilli

11 That the infection may begin in the epithelial surface of the air cells of the respiratory tract, and probably, in some instances, also in that of the mucous membrane of the intestinal tract

12 That when bacilli pass into the system they do so by way either of the blood capillaries or of the lymphatic vessels in the walls of the air passages and the villi of the intestines

13 That when they have passed into the blood capillaries they may produce localized tubercles at the point of inoculation, or may, by passing into the blood current, produce infection at points and in organs distant from the same

14 That inoculation into the lymphatics, while capable of producing localized infection, tends to transmission of the bacilli to the neighboring lymphatic glands and to the prevention of the progress of tubercular infection of the system

15 That while inoculation by means of the blood vessels of the intestines may result in tubercles in the liver, spleen, etc, yet inoculation by the chyliferous lymphatic is likely to result in tubercles localized in the lymphatic glands, especially of the intestines and mesentery

16 That both in man and cattle, by far the most common seat of tubercles is in the lungs and adjacent lymphatic glands, and that this fact, along with the statistical evidence of the frequently repeated cases of pulmonary tuberculosis in persons exposed to the infected air of sick rooms and in cows to that of infected stables, points to the inference that the great proportion of cases of tuberculosis are the results of aerial infection by way of the respiratory tract

17 That while the great number of deaths from tuberculosis in children, as from *tabes mesenterica* or consumption of the bowels, points to the probability of frequent cases of infection through milk and other food by way of the alimentary tract, yet the still larger number of cases of lung tuberculosis in children, the relatively small number of calves and young cattle infected with tuberculosis and the comparatively few instances of tuberculous cattle in which the intestines, mesentery or other abdominal organs are found on examination to be exclusively tubercular, point very strongly to the conclusion that infection by way of the intestines is relatively seldom in cattle, and that where it does take place in children it most probably is dependent on the previously unhealthy and congested state of the mucous membrane of the walls of the stomach and of the intestines

After the most careful experiments, Drs Ernst and Peters arrive at these conclusions concerning the infectiousness of milk "First and emphatically, that the milk from cows affected with tuberculosis in any part of the body may contain the virus of the disease

"That the virus is present whether there is disease of the udder or not

"That there is no ground for the assertion that there must be a lesion of the udder before the milk can contain the infection of tuberculosis

"That, on the contrary, the bacilli of tuberculosis are present, but with no discoverable udder lesions"

It will be noticed that these investigators, although working in widely different fields, have made one point in common which seems to be of great significance so far as its propagation is concerned, that is "that the juice of the muscles has been found to produce infection when no tubercle of muscular tissue was found, but when it was found in other structures of the body" The milk of cows suffering from tubercle in the lungs but without any lesion of the udder or the presence in the milk of any bacillus, will by inoculation produce tuberculosis This would seem to add weight to the question already raised, whether the disease is caused by the bacilli, or by a virus of which the bacillus is only an incident The prevention and cure by anti-tubercle serum as advocated by Dr Paul Paquin and others, if efficacious would do much to save life and prevent the destruction of property Should further data be needed to show the important place this subject would hold in governmental investigation, it is only necessary to call attention to the commercial importance of our beef and dairy products, the market for which is now in jeopardy by reason of the exaggerated fears of people lest they gather to themselves the seeds of *disease*

The subjects which would demand attention from a Department of Public Health, are exceedingly numerous The question of proprietary medicine which interests every family in the land, is an evil which in spite of the continuous maledictions that have been hurled against it by all scientific medicine, both as organizations and as individuals, has continued to thrive, until at the present time it is intrenched behind millions of money and is held in high esteem by the people because of its ability to hide its worthless character or possible dangerous combination behind a trade-mark If the manufacturers of these nostrums were obliged to deposit with the Public Health Department, under certain restrictions, as suggested by Dr Stewart, the formulæ from which they are prepared, it would do more to eradicate this stupendous swindle from the land than all the fulminations that could be hurled at it for centuries, it would have an equally elevating effect upon the science of pharmacy which is so indispensable to our success

The question of pure unadulterated foods, pure drugs, pure water, the cause and prevention of the degeneration already alluded to and the resulting increase of insanity, the effect of our varied climate upon the diseases we suffer from, and many others all press for solution, until we are ready to echo the sentiment of the Norse legend

> "Labor with what zeal we will,
> Something still remains undone,
> Something uncompleted still,
> Waits the rising of the sun
>
> "By the bedside, on the stair,
> At the threshold, near the gates,
> With its menace or its prayer,
> Like a mendicant it waits,
>
> "Waits, and will not go away,—
> Waits, and will not be gainsaid
> By the cares of yesterday
> Each to-day is heavier made,
>
> "Till at length it is, or seems,
> Greater than our strength can bear,—
> As the burden of our dreams,
> Pressing on us everywhere,
>
> "And we stand from day to day
> Like the dwarfs of times gone by,
> Who, as Northern legends say,
> On their shoulders held the sky"

A Quadruple Birth —A case of this nature is reported from Brooklyn, in the family of a tailor named Lowenstein The mother died with the delivery of the fourth child Two of the four—the two first born—survived They are males, one of these has since succumbed The two juniors, a boy and a girl, were born dead The combined weight of the four children was sixteen pounds

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ADDRESS OF WELCOME,

TO THE AMERICAN MEDICAL ASSOCIATION, AT THE MEETING IN BALTIMORE, MAY 7, 1895

BY S C CHEW, A.M, M D

BALTIMORE

Gentlemen of the American Medical Association — The medical profession of Baltimore tenders to you a most cordial and fraternal greeting Eight and twenty years have passed since this city was last honored by your presence here, and the changes which in that time have taken place in the Association, and in the world around us, are a measure of the changes —happily advances in knowledge,—which have occurred in medical science For though our organization has enjoyed a continuous and vigorous existence in its corporate capacity from its last sojourn here to the present time, yet it may be suspected that comparatively few of those who were then members of this body are with us to-day Since then a whole generation of physicians has largely passed away Another generation has come into existence, so that of those active and strenuous workers in the profession who are here to-day, many had then not entered it, and some, no doubt, were unborn

> "The old order has changed and yielded place to new"

And if such difference exists in our Association, how different, too, were our surroundings at that time. In 1866 the population of the United States was 35,000,000, now it is nearly, if not quite, 70,000,000 Baltimore, when you were last gathered here, was a city of about 250,000 souls, and now it numbers 500,000 But a more important change in its interest to our profession than mere increase of population is found in the fact that this city has become one of the chief centers of medical education in the country, and as such attracts here about a thousand medical students every year

Again, at your former meeting here, the swell of the storm of civil conflict had not yet wholly subsided, some of its sad results were in many places still manifest and flagrant, and among them was the retardation of medical progress For, if in the midst of arms the laws are silent, so too the voice of science is hushed or lowered Peace is the atmosphere in which she flourishes and achieves her greatest triumphs, and in that long and blessed peace which our country has enjoyed, how great are the advances which medical science has made And perhaps the greatest of all these advances—greater than the discoveries of specific methods of treatment, though these have been great and most important,—greater than antisepsis, and antitoxin, and the other additions to our therapeutic resources, though these have been numerous and most beneficial,—greater than the devising of operative procedures which thirty years ago were hardly dreamed of, but which have already added *thousands of years to the general sum of human life*,—greater than any of these, "by the all-hail hereafter," because having the "promise and potency" of results exceeding any that have yet been achieved, is the elevation of the standard of medical education and attainment, which has been effected of late years, and which is continually being raised higher and higher For what may not be expected from the future when we consider what an increasingly large number of accurately trained minds are devoting themselves to medical work?—of minds trained thoroughly, both in those preliminary branches of science which bear directly upon medicine, such as biology, histology, bacteriology and chemistry, and also in those which are of the very center and essence of medicine itself, such as pathology and experimental therapeutics Many are now entering our profession every year, equipped with a knowledge of scientific methods of research and practice which not long ago were entirely or in great degree unknown

This is what the higher medical education is accomplishing, that wherever civilization extends, medicine is prosecuted by multitudes of earnest workers in the spirit of that inductive philosophy, of which it has been finely said that "It never rests, is never perfect Its law is progress A point which yesterday was invisible, is its goal to day, and will be its *starting-post to morrow* " *The attainments of this* present time *will* hereafter seem but faint beginnings in comparison with what the future will achieve For,

'Though much is done, much more remains to do"

A broader light will surely illumine much that is now obscure More delicate methods of examination than any we now possess, will foreshadow impending diseases, or detect them at earlier and more remediable periods of their courses The histologic changes in which inflammations take their rise, will be more clearly made out in their very beginning, and their train of consequences arrested The ptomaines and other poisons by which "the life of all the blood is touched corruptibly," and zymotic diseases produced, will be more thoroughly investigated, and more efficiently guarded against, neutralized or expelled Epidemic diseases, the nature and origin of which are involved in obscurity, the pestilence that now "walketh in darkness," will be set in clear light, to be *blotted from the* sum of human ills forever The great subject of neuro pathology, now almost in its infancy, will receive immense development, not only through increased knowledge of the special functions of different portions of the brain and cord, but by the power which may then be possessed of tracing the earliest disturbances in vascular and glandular action to altered innervation *All these gains which* the future may have in store, and countless *others of* which we do not now even dream, will be the results of the higher medical education

And if, hereafter, those of the present day shall be regarded as

"the ancients of the earth,
And in the morning of the times,"

yet it will be looked back upon as a morning not clouded over with the *mists of error, prejudice* and superstition, but bright with the *promise of* those good things which then will be bl*essed realities*

This is what the higher medical *education* is effecting, that every year a greater number of earnest workers are entering the profession of medicine better qualified for its labors and *duties* And what are those duties? We are perfectly familiar with them, and yet, perhaps it is well from time to time to regard them steadily in order to deepen the impressions which they should make upon us What are the great objects to which our *medical* science is devoted? Are they not these? *First,* on its practical side, briefly this,—"that they may have life, and *that* they may have it more abundantly " The prolongation of life, the mitigation of the evils of life, the assuagement of the pains of life, are what it seeks to accomplish And on its ideal side it has no other object than the search for truth,—the pure and perfect truth It is never concerned in making the worse appear the better reason, it admits no *stare decisis* doctrine, it is not guided in its conclusions by authority as having value in itself apart from the evidence it offers It seeks for truth and for truth alone in the spirit of those great words, "The truth shall make you free," words, which, *as in the highest* sense in which they were first spoken, so in every subordinate sphere in which truth is earnestly sought for, will be found to justify themselves Freedom in some form is ever gained by a knowledge of truth Freedom from the shackles of ignorance, freedom from the physical ills of pain and disease, with which human life is environed, freedom from the follies of charlatanry and false systems,—the countless *isms* and *pathies* of the day,—those "oppositions or *antitheses* of science falsely so called," from which rational medicine is separated as by the barrier that divides order from confusion, light from darkness, these are the good gifts to be imparted by a knowledge of those truths for which we, as physicians, are striving

Gentlemen of the ASSOCIATION, in welcoming you here to day it is our earnest wish that the counsels which you take together may be instrumental and effective *in promoting* these *high* objects

LECTURES

LECTURES ON INTRACRANIAL SURGERY

XI—THE SURGICAL TREATMENT OF INSANITY

BY EMORY LANPHEAR, M D, Ph D

ST LOUIS MO

Every extensive insane asylum in *the world* contains scores of patients whose minds might have been saved by timely and proper surgical treatment Nor do I include in this statement those numerous cases which apparently depend upon peripheral irritation, patients who might be greatly benefited, and some perhaps cured, by the removal of irritating scar tissue, hemorrhoids, diseased uterine appendages, etc, *for in the work* of such men as Rohé, of Baltimore, *we have seen too many* instances of improvement after operation, to allow us to longer doubt the assertion that there are some insanities due to, or *at least* aggravated by, the long-continued irritation *of peripheral* nerves, even in my own limited *field, I have* seen mental aberration of very severe *degree disappear* almost as by magic under repair of lacerations of the cervix, removal of diseased ovaries, and the cure of rectal disease—hence my *plea for* closer physical examination of every insane patient, for the discovery of conditions which may be removed by surgical means *May* be removed? Nay, *should* be, even in the face of the objections of many neurologists who violently oppose every effort of the surgeon to invade the field they have so long held sacred to themselves, and at any stage of the disease—just as soon as the local *trouble* is discovered Even some asylum physicians are recently acknowledging the truth of this assertion Thus Dr L A Weatherby, Physician to Bailbrook Asylum, in an article which has been severely criticized by some psychiatrists, says "I am myself satisfied that the surgical treatment and cure of hemorrhoids, contracted sphincters ani, tumors and fissures of the rectum, displacements and other diseases of the uterus often—by removing the exciting cause—brings to a happy termination many a chondriasis. Cases under my own personal observation have proved this beyond question." The followers of Pratt, in the line of orificial surgery, though carried to an extreme by their enthusiasm, are calling deserved attention to a kind of work that may yield good results. But, enticing as is this line of thought, it can not be considered in a lecture limited to intracranial surgery, so my remarks must be confined to insanity dependent upon trauma, tumors, softening, abscess and like affections. Nor are such cases rare, as I have intimated in my opening statement. Upon the contrary they are very common—far more so than alienists of the not remote past have led us to believe; it is one of the blots upon the pages of modern surgical history that so many cases of epilepsy and insanity have been allowed to develop subsequent to head injuries.

Upon careful search I can find little in medical literature upon the subject of trephining for insanity, and nothing that is very definite or satisfactory. Indeed, it is quite probable that nothing of great importance, save here and there the report of single cases with comments, is to be found anywhere since Weatherby in the *International Medical Annual* for 1889 says: "Surgery has so far played an exceedingly small part in the treatment of insanity, and yet we are beginning more and more to believe that surgical interference may do good in many cases of mental disease. Latterly, operation has been found to give great relief in cases where intracranial pressure was suspected, and on operation found to be present. We may well be justified in the belief that in time, as our knowledge of the localization of brain diseases becomes more definite, the use of the trephine will be a more constant factor in the treatment of some forms of insanity."

At the outset of our study of this subject it may be said that osteal and dural disease, as well as both structural and functional disturbance of the cortical and subcortical tissues, may occasion every variety and degree of mental aberration. We must, therefore, study each case that we meet, not so much with the idea of distinguishing the particular form or variety of insanity with which the patient is afflicted, as to determine the cause of the trouble and to decide what is the pathologic condition which gives rise to the morbid manifestations. For while we hope that the time may soon come when we can boldly open the cranium and correct certain abnormal conditions by means not yet discovered (and which we may not understand when found—as is true of the cure of tubercular peritonitis by simple laparotomy) we must at the present time confine our work to cases in which we are sure gross lesion exists; it would be manifestly absurd to open the skull for an insanity of toxic cause, whether of extrinsic origin or due to auto-intoxication; or to operate for a purely functional disturbance (if there be such) of the thought centers. The question, Is this case one for operation or is it not? is a most important one, and one which requires the most careful consideration, for we must bear in mind the fact that "insanity from gross lesions of the brain (tumors, new growths of all kinds, enostoses, spicules or portions of depressed bone, embolisms, hemorrhages, softening, cysticerci, etc.) is attended with the same indications as those conditions which arise from diffuse disorders of the brain; that is, giving rise to any of the symptoms of the various psycho-neuroses and cerebro-psychoses. The lowered moral and mental tone after cerebral hemorrhages, for example, is a matter of common observation, as after one an individual is rarely observed to be himself again." (Pepper's "System of Medicine"). The necessity for a most careful investigation to discover the *cause* is at once apparent.

The classes of cases thus far subjected to operation are:

1. Traumatic.
2. Organic.
    - *a.* Hemorrhage.
    - *b.* Abscess.
    - *c.* Tumor.
    - *d.* Meningitis.
    - *e.* Softening.
    - *f.* Chronic hydrocephalus.
3. Epileptic.
4. General paresis.
5. Syphilitic.
6. Paranoiac.

1. *Traumatic Insanity*.—Mental disturbances the result of trauma may assume the form of: (*a*), mania; (*b*), general affective degeneration—changes in character or moral nature; (*c*), general pseudo-paresis; (*d*), dementia. Fracture, with depression, is a very common cause of insanity, but it is not even necessary that there should be depression. Shaw ("Mental Diseases," page 130) says: "While fractures of the skull, with depression, are most likely to lead to serious mental mischief, yet even simple concussion may induce chronic, incurable insanity, or the disposition to it." Hence no blow upon the head of a person of neurotic tendency can be deemed insignificant; and trephining should be done at the time of accident if there be the slightest indication therefor. We must not follow the old pernicious doctrine that fractures of the skull should be left alone if not attended by symptoms of serious compression.

Garmany asserts that more than 50 per cent. of severe injuries to the frontal region, when untrephined end in epilepsy and insanity; so far as I can discover from the meager literature of the subject, less than 10 per cent. operated upon have a disastrous termination—so it may be said that fully 80 per cent. of cases of traumatic insanity might be prevented by appropriate treatment at the time of accident. As a parallel to my remark upon the prevention of epilepsy, I may then well observe that:

The way to cure traumatic insanity is to prevent it!

The significance of this remark is at once apparent when we consider the fact that only too oft the chance of recovery vanishes with the passing years, since late operation for traumatic insanity, like that for epilepsy, does not promise brilliant results because the persistent irritation of brain produces such organic change in the brain substance that nature is unable to effect complete regeneration after the source of irritation has been removed. The lesson is, therefore, to operate upon every case of insanity dependent upon demonstrable lesion amenable to surgical treatment at the earliest possible moment after development of the mental disturbance; and in serious injury to the skull to elevate depressed fracture, etc., at the time of accident, in order to prevent the appearance of this formidable condition.

The words of Agnew in his last paper are peculiarly appropriate at this point: "Whenever the medical profession can, in my judgment, accept the doctrine that *every depressed fracture, however small the* *depression and irrespective of pressure symptoms, is a proper subject for trephining,* then will traumatic epilepsy and insanity largely disappear "

But the mere lapse of years need not prevent surgical interference in cases where there can be little doubt as to the connection between the head trouble and the insanity, for some most brilliant results have been obtained from operative measures even many years after the mind appeared totally shattered

A case which shows what may sometimes be accomplished in the treatment of this form of insanity, even a long time after the development of the disease is as follows

Traumatic Insanity—Trephining After Three Years—Complete Recovery—P G , was 52 years of age at the time of operation Some four years before he came under my care he was kicked upon the forehead by a mule There was a marked depressed fracture of the frontal bone in the median line just at the margin of the hairy scalp , but as he fell in to the hands of a ' conservative" surgeon who believed that a depressed fracture should not be operated upon unless profound symptoms of pressure are present he was not trephined, because he was unconscious but a few moments and very soon went about his business as if the injury were of no consequence If a progressive modern surgeon had been called, who believed that every depressed fracture of the skull should be subjected to operation at the time of injury, however slight the depression and irrespective of pressure symptoms, the most disastrous consequences might have been averted , for very soon a most remarkable change occurred in the patient Before the accident he was an exemplary husband, and devoted father , a strong opponent of intoxicating liquors and a Christian gentleman , noted for his integrity and excellent character But soon it was seen that his character was totally changed—he deserted his wife and sought the companionship of prostitutes , he was so abusive to his children when at home that they fled from him in terror , he became so addicted to the use of whisky that he soon wasted his property and sunk to the level of the drunken sot, as often found in the gutter as in bed , he cursed and swore and seemed to lose all sense of manhood and decency—he was obscene, vulgar and debased This condition continued for a period of more than three years with occasional intervals in which it was thought he was going to ' reform" , finally after a long debauch suicidal and homicidal impulses became predominant, and at last the relatives consented to operation Upon removing the depressed bone a large fragment of the vitreous plate was found projecting through the dura an inch or more into the frontal lobes The superior longitudinal sinus was crushed and filled with organized blood clot, and much of the middle frontal convolutions showed signs of pressure but no decided degeneration There was little shock and no meningitis following this extensive operation A marked quietness instead of constant restlessnesss was the first change noticed in the mental condition , the countenance became more serene, the voice less coarse As convalescence progressed it was found that the patient was more like his former self—he greeted his wife and children with a pleasant smile and kind words instead of scowls and curses And when bodily health was completely restored he became his old self once more , gentle, affectionate and trustworthy This improvement was not temporary More than two years have elapsed, and his mental condition is as good as before the accident He recalls the incidents of his mad career as one remembers a vivid dream, shuddering at the horrid recollection and trying to forget the terrors in the pleasant realities of the present

Here, gentlemen was a triumph of surgery, a human mind restored even after all hope seemed gone It was a case which followed closely the history outlined by Spitzka ("Text-book of Insanity,"page 371) "The subjects of this disorder are noticed to undergo a change of character, to exhibit a tendency to alcoholic excess, to become morally perverse, suspicious, brutal and quarrelsome and to manifest murderous and other violent impulses, occasionally associated with fits of maniacal exaltation or furor This condition is remarkable for its long duration and its frequent and sudden changes As a rule, dementia terminates the history of the case "

A number of successful operations are mentioned in the *Annual of Universal Medical Sciences* for 1888, by Horsley, Price, MacDonald and Fletcher The latter operated upon eight cases at the Indiana Hospital for the Insane All of the insanities developed some years after the accident and all were subjected to operation a long time after the disease was manifested In all but one, strong adhesions of the brain to the dura were liberated All were melancholic, suicidal and profane, and four of them destructive to clothing All were relieved In none had the cortex undergone any decided pathologic change Commenting upon the reports Senn observes " When we consider that under strict antiseptic precautions trephining can now be done with hardly any risk to to life, it must become apparent that in cases of insanity following fracture of the skull, this operation holds out a ray of light in otherwise hopeless cases The success which has attended the operation thus far is sufficient to warrant further trial "

But such remarkably favorable results as those mentioned and as obtained in the case just related are not often possible long after the injury, as I have found in more than one attempt at restoration of mind in old trauma A marked case may be briefly summarized thus

Traumatic Insanity—Operation—No Improvement—Death by Suicide—Wm W , a young man of much promise fell and fractured his skull in the fronto parietal region He soon after became morose and sullen abandoning his studious habits and deserted his refined companions He became addicted to the excessive use of whisky, associated with gamblers and courtesans, neglected his business and family, and finally degenerated into a high-grade imbecile, typical terminal dementia—irresponsible, epileptic and sometimes maniacal, throughout markedly hysterical After some three years of this kind of life he became my patient I trephined him, corrected the difficulty fully as I thought, and expected a brilliant result Recovery from the operation was prompt and satisfactory so far as his bodily condition was concerned, but a melancholia followed and he committed suicide a few weeks after his discharge from the hospital

Had this patient been properly treated at the time of injury this disastrous result would have been averted More than this—I am of opinion that had I had an opportunity of operating soon after the development of the insanity, before such changes occurred in the brain as to prevent regeneration after removal of the cause, I might still have saved the life and mind of this young man The case emphasizes the necessity for operation soon after the onset of mental symptoms, but still more strongly teaches that all injuries of the frontal region, of serious degree, imperatively demand operation at the time of accident , regardless of the teaching of the past

Quite a number of successful results have been obtained in this city from trephining in cases of traumatic insanity of recent development, by Drs G W Cale (two cases), F J Lutz, T F Prewitt and W H Mayfield It is unfortunate that *all* cases of insanity operated upon have not been reported, giving results, whether favorable or unfavorable

2 *Organic Dementia* —"Organic dementia is the insanity which results from cerebral hemorrhage, embolism thrombosis, ramollissement, tumors, hydatids, pachymeningitis and a few other affections These cerebral diseases are not necessarily accompanied by mental alienation Still they cause delirium or coma and certain other psychical dis-

turbances very frequently, and it is but natural the mental disorder should have the nature and often the permanency of positive insanity " (Kellogg, "Reference Hand-book of Medical Sciences," vol iv, page 129) These intracranial lesions produce the insanity 1, by direct pressure on the brain convolutions, 2, as irritative lesions, in a reflex way, 3, by obstruction of blood supply, 4, by inflammation and abscess formation, 5, by non-inflammatory softening—as in embolism Some focal diseases may act in not only one but several of these ways The most common character of the psychical manifestations is a progressive impairment of all the mental faculties, ending in more or less complete loss of mind, in one of my cases (Wm K, presently to be mentioned) this amounted to total and permanent idiocy From what has been said, the necessity for early operation is obvious

(*a*) Insanity due to hemorrhage I can find no account of any operation done for mental trouble due to cerebral hemorrhage, except the case of McBurney, of New York, who trephined and removed an irritating clot four months after the rupture of the vessel, with complete cure of the mental disease But the excellent prospects of cure make me advise operation in every recent case of insanity following accessible meningeal or cerebral hemorrhage

(*b*) Insanity due to abscess As a general thing abscesses of the brain are too rapid in their progress to give rise to chronic insanity, yet occasionally the diseased condition may exist for many months unsuspected or at least undetected I believe that in every case of insanity preceded by chronic otitis media with suppuration, exposure of the favorite seat of cerebral abscess is justifiable And where abscess is believed to be present elsewhere, exploratory trephining should be done It will be remembered that one of my cerebral abscesses of the frontal region (Case 3, JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, April 13, 1895) was accompanied by serious affection of the mind, and that all the mental symptoms disappeared immediately after evacuation of the accumulation of pus

(*c*) Insanity due to tumor Here the symptoms are exceedingly changeable and often chronic At first they consist chiefly of headache, giddiness, and sleeplessness, together with irritability, restlessness, loss of self-control and hallucinations of the special senses, later, progressive failure of the mental faculties occurs, sometimes ending in total obliteration of all sense This was typically shown in a case I operated upon, viz

Durhematoma (Cyst of the Arachnoid), with Insanity—Operation—Death —W K, of the Indian Territory, was first seen by me Jan 8, 1892 A satisfactory previous history was not obtainable, but it seems that he was as intelligent as other boys until about the age of 14 years, when he began to have epileptic convulsions of the right side, followed by temporary aphasia The spasms finally became general, partaking of all the characteristics of *haut mal* including the mental deterioration Finally, partial paralysis of the right side gradually made its appearance, accompanied by difficulty in remembering names and other nouns As the epilepsy increased in severity this paralytic influence deepened until at last he was completely paralyzed in the right upper extremity, the use of the lower was so greatly impaired as to prevent walking, and language became totally obliterated For a time he read the papers for a little while daily and seemed to understand much of what was said, though his intelligence was evidently greatly impaired Finally he became so nearly imbecile as to require constant watching, particularly during violent outbreaks which were quite common and full of danger to those around, at the time of my examination his mind was a total wreck—he was a typical idiot in his mental condition, though his face showed nothing abnormal

Owing to the fairly clear, though not wholly satisfactory evidence, that the convulsions invariably began in the right hand, then spread until the whole body was involved, and also to the existence of the aphasia after the convulsions and before the dementia appeared, I had him sent to the hospital where I opened the skull, assisted by Drs Krueger and Maxson Upon cutting through the dura a cyst of the arachnoid was found, much larger than a hen's egg, lying over the speech and arm centers This I tried to remove entire, in doing which I exerted too much pressure upon the brain, for the patient ceased breathing (although no chloroform had been given for several minutes) and only revived by long-continued artificial respiration I hastily cut away the cyst and closed the dura, while doing the latter work another suspension of respiratory efforts was noted and again artificial respiration had to be instituted The wound was quickly closed and dressed and the patient placed in bed as hastily as possible, when every possible means to combat shock were employed—*to no* avail, he died within a very short time

Another case of insanity dependent upon tumor, I have already described under the title, "Osteoma—Operation—Recovery," in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, May 4, 1895 As I stated in my lecture on brain tumor, this disease is much more frequent than generally believed—particularly in insane patients, Clouston found brain tumor in 7 of 36 cases of organic dementia in his post mortem work and in 1,000 autopsies upon insane patients, taken without selection there were 28 tumors of the brain, mainly accessible So operable cases must be comparatively frequent

(*d*) Insanity due to pachymeningitis That certain forms of insanity are due to inflammation of the dura (and of the pia also), has been known for long, as post-mortem work has often demonstrated the fact that as a result of chronic pachymeningitis externa, the dura is frequently so adherent to the bone as to defy separation, with many fine osteophytes and sometimes bony plates of some size, while thickening of the arachnoid is quite common in some chronic forms with enlargement of the Pacchionian bodies, and adhesion of the pia to the brain is usual in paretic, syphilitic and alcoholic insanities Quite a number of cases have recently been operated upon by opening the skull widely (2¼ by 4 inches) over the frontal region, opening the dura, carefully breaking up adhesions between membranes and brain, dusting in much iodoform to keep the surfaces temporarily apart and closure of the wound in such manner as to secure primary union Results have not yet been published

(To be continued)

ORIGINAL ARTICLES

NEW DEPARTURES IN THERAPEUTICS

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, May 7-10 1895

BY JOHN H HOLLISTER, A M, M D
CHICAGO

The trend of medical thought in any given age and the theories then accepted are best discerned by a study of its therapeutics

Whether the doctrines of Solidism, Fluidism or Vitalism for the time prevailed, we discover the fact not so much by the nomenclatures which men gave to diseases, as by the impress which was left upon therapeutic teachings And it will not be difficult to determine what are the theories now entertained, when in other days the methods of treatment now proposed shall be reviewed

It is a noticeable fact, and it could not have been otherwise, that in the past in all its conflicts with diseases, medicine was compelled to conduct a defensive warfare So long as essential etiologic factors were unknown it was only possible to deal with *results*, and that, in these procedures our methods should have been largely empirical Along such lines we must have proceeded indefinitely, had not the improved microscope and the perfected laboratory been placed at our command By reason of these and the services they were able to render, our methods of treatment are undergoing a signal and most wonderful revolution Discoveries are already made and methods of treatment which they suggest are so radical and give promise of such before unknown results, as to stamp the closing years of the century with the impress of a new era, from which possibly will date the renascence of medicine

In connection with the investigations and discoveries which have been made during the last twenty years, by reason of which therapy is permitted to assume an attitude so markedly aggressive, two methods of treatment are brought prominently to our attention which, while they revive the old theories of cellular and humoral pathology, yet each give promise of favorable results in the cure of diseases

The older one is designated organic therapy or the therapy of substitution

The latter, which at this date, more than any other subject, commands in both hemispheres critical study by our most accomplished thinkers, workers and writers is that of sero therapy

The cell theory so ably championed by Virchow has still and in the present field an able following, while Behring more than any other, leads the van in the advocacy of humoral pathology and of a special method of treatment conformable thereto

Organo-therapy is based upon the claim that all vital activities have a cell genesis, that cells are possessed of definite organisms and environments, that they are the basis of all functional activities, that in the animal economy through their agency definite results are accomplished, such as those of nutrition, secretion, and excretion, that they are responsible both for constructive and morphologic changes, and that when a perfect equilibrium in their activities is established, the whole economy is in perfect health

It is asserted that the impairment of health begins with the impairment of cells, that these are affected, favorably or otherwise by their environments, that each has need of special pabulum, the withholding of which will surely cause first, impaired functional action, and later, cell degeneration and death, that remedial agents are valuable or otherwise, as they favorably or unfavorably affect the ultimate cell organisms It is asserted in connection with this theory that cells possess an inherent defensive power and that by reason of these, there exists in the animal organism an ever-present and pervasive *vis vitæ*

It is asserted that, as the result of stimulation, the cells develop those substances known as albuminates, proteids and nucleins, and that these are resistant and destructive to toxins that may be introduced into the system, that by reason of the presence or absence of these antitoxins, animals are susceptible or immune to diseases, and that in proportion as cells are irritated by reason of an offending presence they are able, within certain limits, to eliminate an increased amount of their protective substance

That these are the defensive weapons of warfare, and that when the leucocyte embraces the bacillus, as does the octopus its victim, it is not in the capacity of a phagocyte, but for the purpose of bringing more immediately to bear upon the intruder the deadly power of its own toxic secretion, and that thus through the vital energies of the organic cell the antitoxic agent is furnished and immunization becomes possible

Acting upon the presumption that the cells have the elective power in the selection of their foods, similar to that which is apparent in the growth of all the tissues, it came to be believed that the elements essential to the nourishment of particular organs may be supplied, when wanting, from those existing in other like organs, and that special nutritive results can be attained by the use of various organic extracts

Thus the views of Brown-Séquard, at the time but little regarded, have more and more gained in favor, until now this method of treatment is becoming somewhat general and will continue, until by present and future observations its real value is determined

Some of these extracts have been used to a limited extent by your reader during the last two years, particularly the preparation of red-boned marrow, and without a detail of cases, which might here be justly cited as original work, it may be said in a word that in the treatment of some conditions, notably that of simple anemia, by the use of bone-marrow better results seem to be attained than had hitherto been accomplished with either arsenic, oil or iron

Much is just now claimed for the substance termed nuclein, although its discovery is not new For the study of its physiologic properties and for its use as a remedial agent we are mostly indebted to recent valuable labors and to an able advocacy, on the part of Professor Vaughan, of Ann Arbor

In a published address of which nuclein is the subject, he says, speaking of the proteids and albuminates in the same connection "These substances when introduced into the body of animals in certain amounts and under certain circumstances have the property of stimulating certain organs in the animals, so that those organs produce and supply to the blood an antidote to the substance introduced, the glands that manufacture these immunizing agents being mainly the spleen, the thyroid, and bone-marrow"

For nuclein thus obtained much is claimed It is believed to pervade the intestinal canal and by its antiseptic powers, to prevent there, as well as in the tissues, premature decomposition It has power, it is believed, to stimulate brain and nerve centers and thus energize the system when those powers are failing, furnishing a needed stimulant alike to the invalid and to the aged It is believed to exert an antidotal influence against the toxins of diphtheria and after repeated trials by Knapp, Auld, Bleyer and others, its use is strongly recommended in the treatment of this disease The explanation being that when by reason of the invasion of the diphtheria bacillus and when its toxins are acting as a powerful cell irritant, that then by cell reaction an increase of nuclein is developed in the blood, the antitoxin power of which destroys the specific poison The remedy is on trial Its use is strongly recommended Its value is yet to be determined Of its production and the method of its use it is not needful now to speak Strongly as the organic extracts are recommended, we are not over-sanguine as to the good which they may be able to accomplish Their use constitutes one of our new departures, the warrant for which requires further demonstration

We pass now to a second new method of treatment, namely that of sero-therapy The series of discoveries which paved the way for its use, as now recommended, and which are well verified is of interest, whatever may be determined as to their utility

The serum treatment is a sequence of the germ theory of disease, to the development of which a number of most important discoveries contributed It dates primarily to the discovery of cell agency in fermentation in 1836 by Caignard, then to that of Donne a year later, of living organisms in pus, to the discovery in 1838 by Adet and Beaupertius that all forms of putrefaction are accomplished by the agency of living microbes, then to the fact announced by Schwan that the air is largely responsible for their conveyance It was Pollander who in 1839 demonstrated the presence of bacilli in the blood His statements were soon confirmed by Davaine, who also found them present in the tissues The methods of development and the methods of culture of micro-organisms were next made known

Then came that most important announcement that specific microbes isolated by culture are capable of producing specific diseases At this point a serious difficulty was encountered Systemic intoxication by their toxins could be accomplished independent of and beyond the location of the germs They might not be able to accomplish their deadly work *per se*, but they could develop and diffuse toxins which could accomplish that result

How to deal with the different poisons of microbic origin became the question of the hour Happily, for its solution we were not long in waiting It matters not, for the moment, whether to Richet or to Ortaga of Tokyo, or to Behring belongs the credit of the discovery Most important of all, in its practical bearing, is the essential fact, namely, the *germicidic power of blood serum* It were enough for each or either of them if, with reference to this discovery, honors were even

But to Behring alone doubtless belongs its first distinct enunciation, in what henceforth will be known as "Behring's law" His words were these, namely, "that blood and blood serum of a person which had been rendered artificially immune against a certain infectious disease may be transferred into another individual, with the effect to render the latter also immune, no matter how susceptible he is to the disease in question "

This fundamental law of artificial immunization was first enunciated by Behring and Kitasato in 1890 when they demonstrated that the blood rendered immune against anthrax, but made so by repeated inoculation with the anthrax cultures had the power of destroying tetanus toxins, and also that the germicidal power was present in the blood after it was withdrawn from the animal, and finally, that its transfusion to other animals rendered *them* immune from the disease Thus the possibility of artificial immunization became an established fact, not only against bacilli themselves but against their toxins when injected in solutions

The further fact was also demonstrated that the antitoxin potency of serum might be greatly increased by repeated inoculations Then came the question for decision, as to what the serum-potency should be, and the amount to be used permissible with safety. These important facts having been first settled, with reference to tetanus, it became at once a question whether all infective diseases might not in like manner be amenable to treatment

To this end, Haffkin is conducting his experiments now numbered by many thousands in connection with the cholera bacillus But with us during the last two years the paramount attention of almost all investigators has been turned to the treatment of diphtheria The methods now being employed are too familiar to require recital here Serum culture is now so far advanced, both in Europe and in this country, that the means for its use are fully at command Again and again it has been demonstrated that this disease may be propagated at pleasure by cultures of the diphtheretic bacillus The timely use of serum can more easily be made in this disease by reason of the local manifestations which surely demonstrate its presence, and afford ample time for remedial interference

Its bacteriology and pathology were admirably set forth by Dr Simon Flexner of this city, (Baltimore) in an address before the Alumni Association of Jefferson Medical College, and the history of its various phenomena familiar to most of us is there admirably expressed Our literature in fact upon this subject is ample and much of it admirable

But the question that it concerns us now to answer is this, Does the serum treatment give results so favorable as to command for it a permanent place in our therapeutics? It would be an immense labor to tabulate the statistics already published, detailing results from serum treatment

The consensus of opinion in Germany found guarded expression four weeks ago at the Congress of Medicine in Munich It was there stated that in Berlin in connection with its use the mortality fell from 44 to 21 per cent , at the same time Professor Bayinsky reported 525 injected cases The previous fatality had been 21 per cent, while under this treatment it was reduced to 18 per cent And he also stated that in July and August last, when the supply of serum failed, the mortality rose to 51 per cent Others had failed of such favorable results and were eminently conservative as to the benefits which they had witnessed

The views of this body at the close of the discussion were embodied in three resolutions 1, that its use was harmless to patients, 2, that a majority of observers had seen good results, 3, that experiments concerning immunization were not yet sufficient. With reference to their first point taken—namely—that its use is harmless, notes of warning are already sounding along the lines The cautions of Hussman of Berlin, ought not to pass unheeded, nor the recent statements of Dr Joseph E Winters, at a late meeting of the Academy of Medicine, in New York, detailing his experience at the Willard Parker Hospital They should certainly lead us to cautious and critical observation of many cases and their results, before yielding ready assent to the claims put forth, and to an unqualified indorsement of the serum treatment of this disease The able and candid statements of Dr Winters are worthy of most careful consideration

Again, the globucidal power of serum, transferred from one animal to another, and the serious results which may follow therefrom is a subject which has not as yet been sufficiently considered by serum advocates, and in this respect the first resolution of the Munich Congress affirming its harmlessness will hardly prove defensible

Another subject not yet considered in this connection, as it yet *must be*, is that of the effects and counter-effects of *mixed infections* The final demonstrations needful for the settlement of *this* question will call for a devotion of time and of talent transcending that of any other which in medicine or in any other department of learning is asking for the *ablest* of investigation

I close with the consideration of one other point Conceding that infectious diseases are developed by microorganisms, and that germicidal treatment is requisite, *if* it shall be found that the use of blood serum is injurious in its effects, and not warrantable in treatment, it yet remains to determine whether there are not other and safer means yet untried which

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to greatly modify most of our former therapeutic teaching It becomes us to be, to the utmost, diligent in the attainment of facts, to be justly conservative in the acceptance of extreme statements, but to welcome every new departure that gives reasonable promise of rendering benefactions to mankind

DISCUSSION

Dr Quine, of Chicago—Mr Chairman there are two of the new departures in therapeutics to which attention has been directed prominently by the essayists, concerning these I have had a little experience, which possibly justifies me in responding to the invitation that I have just received In regard to the use of the extract of bone marrow, I am glad to be able to indorse unequivocally all that has been said in favor of it in connection with ordinary anemia, or chloranaemia, or even in the treatment of apparent cases of progressive pernicious anemia An example has come under my observation, and indeed it has been reported, of splenic lukemia in which the persistent administration of bone marrow, extending over a period of several months, had the effect of increasing the number of red blood corpuscles to the extent of 17 per cent and the hemoglobin to the extent of 5 per cent, but notwithstanding this excess effect upon the red blood corpuscles, the multiplication of white corpuscles went on with still greater rapidity, so that the total volume of blood was greatly increased by reason of the multiplication of its organized constituents I have had but little experience in the use of diphtheria antitoxin, but enough to enable me to say that I have witnessed some deleterious effects produced by that agent I have witnessed examples of extraordinary eruptions on the skin, and a bloody and somewhat intractable albuminuria which finally eventuated in recovery, but I have also witnessed very striking cures of threatened laryngeal diphtheria and threatened nasal diphtheria as a result of two or three hypodermic injections of the antitoxin under circumstances in which it appeared certain, humanly speaking, that death would have occurred within a period of twenty four or forty-eight hours if a remedy of this kind had not been at hand Physicians of experience have witnessed infants struggling for their breath, and already cyanotic, under circumstances in which immediate resort would be had to tracheotomy, have administered a dose or two of the antitoxin, and next morning in visiting the house of the patient, have peeped around the corner to see if there was crape on the door, and on entering have found the patient breathing freely and easily, and crying in a natural tone of voice Under such circumstances a physician feels warranted in speaking very loudly in favor of the continued employment of this remedy, even if experience has shown that it is a ' gift horse" whose merits need to be very closely inspected

Dr Summers, of New York—I have been for the past nine months almost exclusively experimenting on the subject of nuclein At the Board of Health we have had some extended experiments, comparing it with antitoxin I have a paper upon that subject which I propose to offer, but Dr Hollister has largely "stolen my thunder" I have engaged also for this Section one of the most experienced microphotographers in the city of New York, to exhibit upon a screen the effect of leukocytosis, at some hour which your Chairman will appoint, and I have also an exhibit showing the direct action of this under the microscope I shall not take any of your time in further discussion, but in the paper which I shall present, following the trend of Dr Hollister's remarks, all of this will be elaborated

Dr Turck, of Chicago—Since the experiments of Dr Vaughan, who demonstrated that beyond doubt the toxic effects are carried by the blood throughout the whole system, I have been led in my line, the stomach and intestines, to determine the effect of nuclein in those cases of auto-intoxication from the gastro intestinal tract Whether in fever, or in chronic gastro-intestinal diseases, the most marked symptom is the toxic effect Whether it be the excitement which produces that nervous irritability known as neurosis and neurasthenia, or the depressed state leading to melancholia, we know that these are the results of the toxins of microörganisms growing upon the walls of the gastro intestinal tract We can not reach the intestines directly, but the experiments that I have made with these cases, combining local treatment upon the stomach, the dietetics and the treatment of the colon with the administration of nucleins has had a marked effect against these toxins that are produced in the gastro-intestinal tract Especially in cases of excitement, the vasomotor changes in

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ence There are one or two statements which he made in the beginning of his paper which interested me and I ask the following questions, not with the idea of criticising, but of being instructed He stated that there was a possibility of a certain amount of the mercury being converted into the bichlorid of mercury The results of my studies upon this question I have given in the columns of the *Therapeutic Gazette* The laboratory investigations which I have made have established beyond peradventure that calomel is not converted into bichlorid of mercury There is only two tenths of 1 per cent of hydrochloric acid in calomel, and it has been proved beyond all cavil that the amount which is changed into bichlorid is infinitesimal On the other hand, clinical evidence would seem to prove that it *is* converted into bichlorid, because every investigation of very much note that has been made has proved, at least in the lower animals, that calomel is absolutely without effect in producing a flow of bile, but hydrochloric acid does produce a flow of bile The question as to how calomel does act, whether it is changed by the alkalin juice of the intestine, or whether it acts as calomel or as mercury is unsettled

The statement I am interested in is the statement of the Doctor that calomel is "adulterated" by bichlorid I do not suppose he meant that bichlorid was employed as an adulterant A very able chemist of Philadelphia, in the last few months, has carried out for me a series of studies in this matter In no instance was he able to find that there was any contamination owing to the presence of bichlorid of mercury We might have some oxid of calomel, but there was no single instance in which bichlorid of mercury was found, and I was particularly on the heels of bichlorid of mercury, because I wanted to find out whether it was the bichlorid of mercury which contaminated the mercury, or whether it was the calomel which produced the bilious stools in administering the drug

Dr Stewart —In answer to the first question that was asked, Is it not possible that the bichlorid was the drug which produced the results and not the calomel, I think in my paper I stated clearly that all that was theoretical Together might be grouped the question, both of the gentleman who preceded Dr Hare and that of Dr Hare himself My own belief is just as Dr Hare has said, that there is very little of the calomel itself converted into the bichlorid in the stomach That is all theoretical Now comes up a question Is there a difference between a chemic reaction conducted in the laboratory and that conducted in the stomach itself without outside interference? That is, is not a strict chemic reaction in all probability slightly different from that which is produced by what might be termed a chemico-physiologic action in the stomach? It is well known that if we interfere with the nervous supplies of any part we will have one of two results, namely, over-activity of that part or decreased activity of that part, and it is my own belief that in interfering with the stomach by operations, we interfere more or less with the active secretion of the stomach Clinically, when I give calomel to my patients in one tenth of a grain I do get the bilious stools I can not say that the action comes from the calomel or the bichlorid, it may be one, it may be both, it may be either In regard to Dr Hare's other point, namely, in regard to the possibility of contamination of these different products by the bichlorid, my experience in the examination of these preparations has been different from those of the gentleman whom Dr Hare quoted I have found bichlorid present in calomel, due either to the improper drug being used or insufficient care being taken in manufacture, or else due to chemic change occurring afterward I am not quite certain as to the authority quoted in a late number of the United States Dispensatory, in which facts are given which show us that calomel is subject to the presence of large quantities of bichlorid of mercury, and where one case is reported and the authority given for it where poisonous effects were presumed to occur from the use of calomel This whole matter of the action of calomel in the gastro-intestinal canal is theoretical

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SOME POINTS IN THE ETIOLOGY OF PULMONARY TUBERCULOSIS

Read in the Section on Practice of Medicine at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md, May 7 10 1895

BY FRANK S PARSONS, M D
EDITOR OF THE TIMES AND REGISTER PHILADELPHIA PA

In considering the subject of pulmonary tuberculosis, and in endeavoring to support a theory deduced from etiologic facts, which tends to show that the almost universally accepted germ cause of this disease is quite secondary in its influence, it must be admitted that, while it is evident to my mind the ground taken is not irrelevant, much opposition is to be expected

Most physicians recognize, in certain individuals, a pre-tubercular condition, meaning by this term that in such persons who subsequently develop tuberculosis an abnormal condition exists, which, while symptomatic or suggestive of consumption, does not give that evidence of the disease which renders the diagnosis absolute, *i e*, the demonstration of tubercle bacilli

It can not be denied that the tubercle bacillus plays an important part in the phenomenal expression, if not in the etiology of tuberculosis, but facts are daily being brought to light which tend to prove that the bacillus alone is as inefficient as a grain of wheat is ungerminative without sunlight, air and moisture

When one considers the impunity with which colonies of tubercle bacilli are probably taken into the system of the majority of persons, we must fall back on the certainty of a preexisting condition, which, when present, offers favorable influence for the development of the bacilli, on which the latter depend for support, and without which the germ is rendered inert, even though it may exist in the blood

Hardly an autopsy is made wherein it is not seen that some time during the life of the subject, tubercles had been present in the lung, or in other tissues of the body, which tubercles had resolved or had been discharged as evidenced by cicatricial repair We know to obtain cicatricial repair of lung tissue a suppurative process must have coexisted, and that suppuration never takes place where there is not interference with, or stasis of the circulation of a part involved In other words, there is a loss of normal correlation between the supply of arterial blood, carrying oxygen and nutrition to the part, and the venous blood, bearing away the carbonic acid gas and waste tissue elements

Essentially, then, perfect tissue repair is one with perfect circulation, and conversely, any stasis to the circulation prevents perfect repair Any suppurative action must have origin in an obstruction to circulation in the part affected, and resolution, occurring during any stage, depends on the reestablishing of normal correlation in the entire circulation of such diseased tissue Abscess formation is nature's way of ridding tissues of abnormal waste when the circulation is impeded

Circulation in the animal system is a complex phenomenon, physiologically of two kinds afferent and efferent, anatomically of three kinds arterial, which is superabundantly generous for nutrition, venous, which is inadequate for the removal of all the excess, lymphatic, which supplements the office of the veins in removing waste A vigorously active lymphatic system precludes danger from tissue stasis in rapidly wasting parts, while inactivity of the system implies obstruction

We may logically distinguish the lacteals and lymphatics as belonging to different systems It is true that both character of vessels hold pabulum, a fact which does not argue against the lymphatic as being a system, the office of which is purely emunctory, for the pabulum found in these vessels, that is not excreta in the strict sense, is so in significance being an excess of nutritional material which would speedily assume the form of an irritant were it not removed to a new situation as implied in its restoration to the general circulation

The lymphatic system, excluded from the lacteals being accepted as primal emunctory organs, it must follow that glands like the pancreas, liver, kidneys etc, must be considered as secondary or excremental emunctories

Tubercle is first met with where lymphoma or lymphangitis has altered the correlative relations of the lymphatic system, and its meaning is that obstruction exists

It is to be argued that, primarily, tubercle is a thing having no objective nature and it can be similarly said of the tubercle bacillus Tubercle not being an objective must be a subjective condition, the subjective lying primarily with a perversion of the lymphatic system

We may now also see how default in lymphatic action is the starting point out of which may arise many phenomena of disease, and that tuberculosis is in reality not a disease but a symptom—a symptom of lymphatic disturbance or stasis This fact is proved by the analogy between lymphoma or surgical tuberculosis and phthisis or tuberculosis of the lungs

What, then, is the cause of lymphatic stasis leading to a condition which *may* result in tuberculosis?

We know that an irritation acutely expressed, as in the case of burns, induces active inflammation We also know that irritation of a mild degree, applied continuously, induces chronic inflammation, as in the case of gastric catarrh from the alcoholic habit We have seen how irritation, increasing the flow of blood to a part, tends to cause hypertrophy of that part, yet, that so long as the efferent vessels carry off the additional waste there is no tendency to ulceration, or retrograde tissue metamorphoses, other than that induced by the contraction of new tissue formation, and the secondary cutting off of the blood supply But as soon as the correlation between the efferent and afferent vessels becomes interfered with, and the waste products are left in the part, ulcerative and suppurative changes take place

The direct cause of lymphatic stasis may lie in an excessive amount of waste *material* in the blood, choking up lymphatic circulation These waste elements may differ in character and only act as local irritants from the fact that they are in an incompetent position in the circulation for nutrition, as evidenced by the attempt nature makes to excrete them

It is a fact that in phthisis the venous blood is brighter than normal This gives evidence that oxygen imbibed by the red blood corpuscles in the lungs is not properly oxidized in the tissues, and passes over through the capillaries in a free state We know that the blood contains phosphorus in an oxidizable form, and that oxygen has a great chemic affinity for phosphorus, hence it is not out of reason to infer that, in this disease there is a deficiency in oxidizable phosphorus This statement is borne out by the results of phosphorus feeding to phthisical persons, when the venous blood soon assumes its naturally darkened hue

It is on complete oxidation in the blood that the healthy cellular life of the animal depends Deoxidation means death Life is opposed to death, and nature is continually striving to preserve the former by preventing deoxidation and ridding herself of such animal cells as have become deoxidized As soon as deoxidation in a cell takes place, that cell becomes devitalized, and is crowded out of its relation with living cells If it can pass out through the excrementory channels, as nature intended it should, no harm will result, even if many bacteria are feasting on the defunct cell If it can not pass out, but is held by stasis, or obstruction, or overcrowding, in its relation with other cells which have become devitalized we soon have a collection of dead material causing irritation to the nerve elements of surrounding tissue, and inflammation results

I incline to the opinion that we have 1, a stasis of waste elements in the lymphatics, 2, a nerve cell paralysis due to the stasis, 3, increased blood supply to the part as a result of the paralysis, and which, owing to the existing obstruction, brings about the phenomenon inflammation All this is prior to the introduction of a tubercle bacillus

When the tubercle bacillus enters the system of a person presenting a favorable cultivation ground for its development (which cultivation ground may be recognized in a lymphatic stasis) the attack is directed only to devitalized cells Of this point we may feel quite certain, inasmuch as oxygen destroys the bacillus, and a thoroughly oxygenized blood cell will resist the attacks of bacilli Bacteria, when no obstruction to waste elements exists, pass out of the body through the various emunctory organs Their products of toxins and toxalbumins are likewise eliminated without harm to the individual Animal experimentation, for the production of tuberculosis by injections, I feel, is of little value, inasmuch as *only such animals are affected by injections as would develop lymphatic stasis from any sort of irritation mechanically applied*, and the cultivation ground is at once presented

It must be rationally argued that the favorable medium for one kind of bacillus may not be identical with that of another and, hence, various forms of germs may appear in different diseases, not because the germs are specific, except as diagnostic phenomena, but because they develop and multiply in different media

It is to be assumed that a cause for lymphatic obstruction may be found in an incompetent excrementory organ, which theory is perfectly in accord with the acknowledgment of the lymphatic origin of tuberculosis Such organ may be the seat of congenital or acquired incompetency, hence our cases giving family histories of phthisis

Acquired consumption may arise from a pneumonia, the frequent "taking of colds," a bronchial catarrh and other respiratory disorders in which the lymphatic circulation of lung tissue is obstructed to a greater or less extent, and the blood cells devitalized Cure depends on the restoration of eliminative function in these lymphatics and in building up the general system by restoration of impaired oxidation

The question whether pulmonary tuberculosis may be communicated by contagion, or infection, does not rest with the proving that a specific germ is found in this disease, for we must know that unless a favorable medium is presented such germ will not develop, and that to obtain this medium there must be a previous condition to be recognized as pathological

The conclusions regarding the etiology of pulmonary tuberculosis which I have endeavored to show in so brief a paper may be summed up as follows

1 Pulmonary tuberculosis should be considered as primarily due to a lymphatic stasis, of congenital or acquired variety, depending on incompetency of excrementory function, and deoxidation of blood cells

2 That the tubercle bacillus should be regarded as a phenomenal expression of the disease, only because a favorable medium exists in the lymphatic stasis for its cultivation, and, hence, symptomatic rather than etiological Its development is often some length of time after the stasis is apparent, as evidenced by the so called scrofulous condition existing in most phthisical persons

The great danger in considering the etiology of pulmonary tuberculosis lies in the fact that we are too prone to lose sight of the chemic composition of man, and the fact that disease is but a chemic decomposition, in the universal furor after a specific germ, the phenomena of which may be observed in various media in and outside the body

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A REPORT OF THIRTY-FOUR CASES OF PULMONARY TUBERCULOSIS TREATED BY THE METHOD OF CARASSO OF GENOA

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md, May 7-10, 1895

BY DeLANOY ROCHESTER, M D

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In the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION for Sept 1, 1894, is a selection from the *Cent f Bakter u Parasitenk*, by Carasso, of Genoa, in which occurs the following "The author believes that Mentha exerts a direct bactericidal action upon the bacilli in the respiratory tract and that, by absorption into the circulation, it acts as a general disinfectant Creasote acts beneficially in pulmonary tuberculosis by increasing the appetite and favoring nutrition It also possesses some action on the secondary inflammatory exudates, favoring their absorption" Carasso's method of treatment in detail is as follows a piece of linen cloth, ten centimeters square is folded to make a pad, five centimeters by two centimeters By means of tape this pad is secured in contact with the nostrils The pad is to be worn day and night and only to be removed at meal times It is to be moistened with five or six drops of peppermint essence four or five times a day The nostrils are to be greased with vaselin for the first few days to prevent irritation The patient is instructed to take eight or ten deep inspirations with closed mouth, retaining the air as long as possible After ten or fifteen minutes rest this procedure is repeated, and so on through the day

The following mixture is given internally

Pure beechwood creasote	8
Alcohol	550
Glycerin	250
Chloroform	20
Essentiæ Menthæ pip	8

A teaspoonful every three hours in a half glassful of water In certain cases the mixture may be further diluted with sweetened water, or the dose may be reduced The nutrition is favored by the method of overfeeding, Two or three liters of sterilized or boiled milk are given daily, together with plenty of meat cooked to taste, and with the addition of 400 or 500 grams of good wine

All hygienic precautions are to be observed The patients are instructed to carefully disinfect their expectoration, thus preventing re-infection

The remarkable feature of Carasso's communication is the clinical report of the cases subjected to this treatment In all cases the physical diagnosis was confirmed by finding the tubercle bacilli in the sputum Many of the cases were well advanced in the disease, though no record is made of cases in which the lung destruction had advanced to the formation of cavities, recognizable by physical examination In all, forty-four cases are reported Of these there were six deaths and thirty eight recoveries The average duration of the treatment in these cases was sixty days The recovery in all the recorded cases seems to have been permanent

Although there are some points in his treatment which seem to me unphysiological and contrary to reason, nevertheless in view of the remarkable percentage of recoveries reported, I decided to give the method as fair a trial as I could and to report the result I was the more readily inclined to such action because I have had the best results among the cases of pulmonary tuberculosis that I have treated in those in which has been combined the inhalation of menthol in petroleum oil and the internal use of increasing doses of creasote

On Oct 1, 1894, I took charge of the "consumption ward" of the Erie County Hospital In the male ward there were at the time thirty-four cases of pulmonary tuberculosis in all stages of the disease. Most of them, however, further advanced than those reported by Carasso In all but six cases, cavity could be demonstrated by physical signs In four of these six there was infiltration of the upper lobe of the right lung, in two of the left In all of these six the process was active and there was rise of temperature in the afternoon of a mild degree

When I came on duty all of the patients were taking pure cod-liver oil, some of them whisky in addition to the oil, and two of the six mentioned above were taking gaining doses of creasote No inhalations of any sort were in use The two patients who were taking the increasing doses of creasote were gaining slowly in weight and had been doing so for three weeks previous to my taking charge

I placed all thirty-four cases on the treatment outlined above, except that no wine was given In some of the cases which seemed to require stimulation, whisky was used

I intended to keep up the treatment for three months, but I have to report the melancholy result that at the end of two months all of the cases were doing so badly that I had to stop the treatment entirely or modify it markedly

It is interesting to note that the two cases which were improving on the increasing doses of creasote continued to improve for a week, i e, continued to gain in weight but by the second week they were losing with the rest and continued to lose as long as they remained on the Carasso treatment They both began to change so rapidly for the worse that at the end of one month I returned to their former mode of treatment, keeping up, however, the peppermint inhalations After the return to the creasote treatment these two cases began to improve again, and when I went off duty Jan 1, 1895, they had gained, one four pounds and the other five All of the thirty-four patients complained of the gastric distress occasioned by the medicine, several of them were forced to actual vomiting One patient complained that the inhalation pad interfered with his breathing, even to the point of distress, so that we were forced to substitute deep inhalations three or four times daily without the constant use of the pad The other thirty-three all spoke of the greater ease with which they breathed and the less frequent attacks of coughing The sputum was not materially diminished in amount in any case, but the coughing spells were diminished in number In the light of the result in these cases, let us review the treatment suggested

In the first place, the inhalation of the peppermint seems to have a decidedly beneficial effect in relieving and improving the character of the cough If continued for a sufficient length of time I do not doubt that it would change the character of the sputum and probably lessen the amount of the sputum As to the rest of the treatment, let us examine it critically, especially in the light of the gastric disturbance that it caused in all of the thirty-four cases that I had under observation

The directions are, 2 or 3 liters of sterilized or boiled milk are given daily, together with plenty of meat cooked to taste The medicine is given every three hours in a half glass of water, i e , in about 125 c c If given every three hours in the twenty-four that would be eight doses, but the sleep of the patients was not disturbed and they received generally six doses in the twenty-four hours, none being given between 9 P M and 6 A M Thus you see there will be given to the patient in the twenty-four hours, especially if the 400 or 500 c c of wine is also taken, from 3,250 to 4,250 c c of fluid, that means about a pint of fluid every three hours between 6 A M and 9 P M, with an extra pint in the night Now we are advised to add to this, "plenty of meat cooked to taste '

Such treatment would be apt to produce disturbance in a normal stomach Supposing that two or three times in the twenty-four hours meat is given Study of the gastric contents has shown among other things that the presence of lactic acid is very apt to overcome and destroy the normal hydrochloric acid of the gastric juice, therefore meat and milk are really incompatibles in gastric digestion

Moreover, the administration of food in the amount proposed at the intervals suggested does not allow the stomach to have the physiologic rest that nature demands As a matter of fact, in most tubercular patients the stomach is dilated, is slow in the digestion of foods and often requires the addition of hydrochloric acid rather than the administration of anything that would tend to overcome or destroy what may be already there Thus we see in the food suggested, even without the medicine, there is reason for the gastric disturbance that occurred in all of my cases Now let us analyze the prescription for internal use, of creasote and essence of peppermint each dose contains the small amount of 0 05 Gm , a little less than 1 minim, the daily amount administered being not more than 0 30 Gm of each, that is about 5 minims Each dose has combined with it 0 10 Gm (about one and a half minims) of chloroform and 1 20 Gm (about twenty minims) of glycerin and enough alcohol to make up the teaspoonful Every one of the constituents of this prescription (with the possible exception of the peppermint) is irritant to the mucous membrane even when diluted with considerable water

I tried this method of Carasso's with several private patients also In every case except one, the gastric distress occasioned by the prescription was complained of

The conclusions that I should draw from my observation of the trial of Carasso's method are that the internal treatment is unphysiological and is very apt to cause disturbance of digestion, the very thing above all others that is to be avoided in the treatment of tubercular patients, that the inhalation of peppermint is valuable and deserves further investigation There is now in process of erection at the Erie County Hospital a special building for the care and treatment of patients suffering with pulmonary tuberculosis In this building we are to have two inhalation chambers so constructed that the patients are surrounded with air saturated with the agent to be used for medication of the respiratory passages

At some future meeting I hope to be able to make a report that will show better results from a more rational mode of procedure

DISCUSSION

Dr Amos of *Baltimore*—*I should* like to speak for a few moments on Dr Rochester's paper About fourteen months ago Dr Osler, of Johns Hopkins Hospital, gave me the care of the treatment of the tuberculous patients in the out-patient department for the purpose of trying Carasso's treatment *In all I have* had some eighty-five to ninety cases of tuberculosis, and in these cases about sixty have been treated now for twelve months In all respects I *may* say that Dr Rochester's conclusions tally with my own I was startled by reading the extract from Carasso's article, in which he laid claim to the fact that under this treatment not only was there amelioration of all the symptoms, in no matter what stage of the disease the patients *might* happen to be, but that he also claimed that in thirty-nine cases, *some* of which had cavities, if I am not mistaken, there was a disappearance of the tubercle bacilli in all cases in from thirteen to sixty days *In all cases that* I treated, the tubercle bacilli were demonstrated in the sputum *In only two cases* I can vouch for the disappearance of the tubercle bacilli *One* occurred after the patient had been in the Adirondacks for *three* weeks, and the other occurred in a working girl here, who had no sanitary *surroundings, this* last being really the sole case in which the *treatment itself might fairly* account for the satisfactory result In over 50 per cent *of the cases* there was an increase in weight for a short time, and then a *diminution* in the weight, so that in order to keep the weight up, the *treatment* was *modified* and increasing doses of creasote were given instead *of stationary ones these* sometimes running as high as 14 to 15 minims three *times* a day These cases were in the out patient department, and it is very difficult to carry out any system of diet in a dispensary The fact that *the amount* of liquid necessarily given in the twenty four hours would disturb even the healthy normal stomach is a great argument against Carasso's treatment We contented ourselves with trying to have super-alimentation, with more solids and less fluids I do not see how it is possible *for* Carasso to verify his results in pulmonary tuberculosis, if the disease is the same in Italy as in this country, and I can not imagine how he can get *such* results as he claims to have obtained

In all his cases there was tuberculosis only of the lungs There was no tuberculosis of any other portion of the body But in some of my cases *there were lesions* of other organs I should say that in over 75 *per cent* of the cases I have treated there was only pulmonary tuberculosis The *lesion* occurred chiefly in those cases in which there was only a slight infiltration *of one* apex or the other In one case there was a notable *diminution in* the number of bacilli in about three weeks, with a cessation of *the* night sweats, and improvement of the appetite, but no gain in weight

In some of the cases that have now been on treatment for fourteen months they still cling tenaciously to the inhalation night and day, although they are almost on the point of death The oil of peppermint, however, seems to relieve them more than anything which I have been able to give them in the way of internal medicine I am now trying to find the oil of peppermint in the urine or any other secretions I have not done any active work on this, however, for the last three or four weeks

Dr Denison, of Denver, Colo —I have a great deal of experience which leads me to indorse Dr Rochester's conclusions for the use of creasote, and I have stopped a great many patients who were using creasote, because of the gastric disturbance which resulted I came a great way to ask Dr Paquin of St Louis, what treatment he had carried out with his horse to get his horse blood serum in order to induce an immunity by its use in tubercular cases I am sorry he is not here He issued a paper in which the case was presented, a great deal like the play of Hamlet with Hamlet left out The milk in the cocoanut was not there What had been done to those horses to create the immunity producing serum? We ought to acknowledge that we have come to the conclusion that there is no cure of tuberculosis except what is accomplished through strengthening the resisting power of the individual, or creating an immunity in the individual blood So far as strengthening the power of resistance in the individual, there is no remedy equal to climate, and that connected with the lessened pressure of the air as we have it in the Rocky mountain region of this country This question is settled in my own mind by the experience of twenty-two years with 3,000 cases

I believe, gentlemen, that we are on the road to curing tuberculosis through the means of creating immunity in the individual I have had 137 cases that I have treated with tuberculin, there were 27 cases of exsection, two or three of them cases of total exsection, who are now living and were treated two or three years ago on the average, and consider themselves pretty well There are many of them claiming to be in perfect health I have not had the bad experience that the fear of the profession would indicate that physicians would have in using that remedy It is a severe remedy, and it needs discrimination, and the most careful diagnosis, in order to be successful

Dr Karl von Ruck of Asheville, N C —I have been very much interested in the two papers which have been read, and in regard to Dr Parsons' paper I only wish to say that I do not believe that tuberculosis of the lymphatics and glandular apparatus as a rule precedes tuberculosis of the lungs I do not think it is possible that suppuration can be produced by stasis of the blood, and do not think it is worth while to spend much time on that point The production of tubercular tissue is not due to stasis, but is due directly to the tubercular bacillus, and the experimentation in this respect is so complete that this question is settled I am glad to see that Dr Rochester has so carefully followed up this work I had preparations of peppermint and menthol made several years ago, and I came to the conclusion that I would not take up this other treatment in their stead Dr Paquin is expected to be here, and I do not wish to say very much about his work, any more than that I have been in St Louis, and have looked up his work, and he has given me every opportunity of doing so The method of procedure followed, to produce what he calls "immunity" in the horse is simply the injecting of culture fluid of the tubercle bacillus in small quantities into the jugular vein, and then taking the blood serum and treating human beings with that I do not think that this work has progressed so far as to justify any conclusions one way or the other He has never shown his horses to be immune, indeed, I do not believe that there is such a thing as immunity to be induced by that treatment, it is simply toleration The Doctor was kind enough to give me some of his serum, and I took that back with me and gave it to a doctor for experimentation, and he injected a number of guinea pigs that had been infected with tuberculosis Our guinea pigs promptly died within forty-eight hours We found upon bacteriologic examination that the serum was full of bacilli, which are now being cultured We have thought best to venture no more guinea pigs on the experiment, but we are injecting a horse, and we propose to introduce a serum which will be at least safe upon animals

I wish to indorse the statement of Dr Denison as to the great value of climatologic influences Many cases can not be cured no matter what we may do, but I would impress upon you the careful management of the cases, so that they may have the greatest benefit, not only from the climate, but also from the other treatment, so as to take advantage of all the means offered in the direction of health

Dr Parsons—It seems clear to my mind that the outline of my paper is perfectly justifiable and logical I regret that it was not more in detail Regarding the treatment, I wish to say a word I think we should not forget that catarrh of the stomach is a coexisting trouble with tuberculosis, and is a disease which should be specifically treated I do not think that creasote has any beneficial influence on catarrh of the stomach, in fact, it is inclined to produce it, and should not be given internally I have had very little beneficial influence from creasote in my experience Climate is an essential treatment, and above all a regeneration and re-oxidization of blood cells is necessary

Dr Rochester—Mr Chairman, I should like to say a word, before taking up my own paper, in regard to the position taken by Dr Parsons, though I think he has been thoroughly answered by Dr von Ruck He says that there is a condition precedent to the development of tuberculosis, and this he calls a "pre-tubercular condition" Where he has such a state, it will be found upon physical examination that there is already tuberculosis present, even although it is not possible to demonstrate the bacillus, or there be no cough I think, moreover, in all cases of pulmonary tuberculosis there is associated therewith tuberculosis of the lymphatic system That I think has been clearly proved by observations of Winthrop on the subject in the New York Foundling Hospital when in 125 autopsies there were found tubercle bacilli in the lungs themselves though some of these cases did not present any symptoms of pulmonary tuberculosis The tuberculous poison is taken in by the respiratory tract As far as regards any pre tubercular state, I think the only pre-tubercular state is anything which in any way reduces the resisting power of the individual, any weakness, any anemia whatever Personally, I do not believe in heredity in tuberculosis, except that we may inherit a poor constitution and excepting also those rare cases, of which I believe not more than one in ten have been recorded, in which the fetus is tubercular There is inhalation from the mother, and the contraction of poison from nursing at the breast of the tubercular mother If we examine cases of tuberculosis in children who are supposed to have inherited this disease, we find that in the majority of instances it comes from the maternal line This means that the child is constantly present with the mother and subject to contagion from her I was glad to hear Dr Amos's report, There is one point I desire particularly to emphasize Several things have been said against the creasote treatment I wish to stand up here and defend the increasing doses of creasote just as strongly as I can By gradually increasing the dose, starting with 1 minim, and giving particular attention to the patient's general condition, there should be steady improvement As to the irritation of the stomach by creasote, this may result if it is given in water, but I have found that it can be administered in claret wine, or in some of the clarets of this country—the California clarets acting very nicely, and being cheap and within nearly everybody's reach—or we can give creasote in mucilage of acacia, and have very excellent results in spite of the slight irritation of the stomach

THE TREATMENT OF TUBERCULOSIS BY INJECTIONS OF IMMUNIZED BLOOD SERUM

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7 10, 1895

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Since the discovery of the specific nature of infectious and contagious maladies, many members of the medical profession have devoted their energies toward finding a specific treatment for each Their efforts have been crowned with success in at least one of the most dreadful maladies of mankind, namely, diphtheria, and this was accomplished in the line of natural law I have the pleasure to report that under the same law, I have obtained by experimentation and in therapeutics, very promising results in the treatment of tuberculosis

Following the researches of various foreign and American authorities on the action of certain physiologic products of the animal body on disease microbes, I have for some years experimented with blood serum of various animals on microorganisms in general, and more recently with horse blood serum on the bacillus of tuberculosis The results of my experiments and the various tests which I have made in the human family, have been such as to warrant the expression that, in immunized horse blood serum, there exists the principle with which to fight tuberculosis in all its forms

THE NATURE OF TUBERCULOSIS

Tuberculosis is, without question, the most universal disease existing It may affect anybody in any climate, and it is found sometimes to have existed in a mild form in people who die of other maladies An Italian medical expert has demonstrated that a large portion of people living without any manifestations of tuberculosis whatever are, nevertheless, infected in the glandular system of some organ or other I think it is Tizzoni, who has proved this fact by post-mortem examinations of a large number of people who had died from the result of accidents This indicates that tuberculosis may have been a long time working in the constitution before any symptom can be detected, or before the patient can notice any trouble We may conclude, therefore, that pulmonary consumption may arise from tuberculosis previously existing in the glands, and possibly it frequently begins thus instead of from direct infection by inhalation Any way there seems to be no question whatever, that tuberculosis may exist in the system in a limited way, concealed for indefinite periods, and that the power which we call vital resistance, namely, the physiologic cellular property of the organization to resist the invasion of germs, prevents the bacilli from accomplishing serious disorganizations, until such time as certain parts of the being are weakened by some process or other, such as bronchitis, la grippe, pneumonia, typhoid fever, colds so called, etc, or when some organs are congenitally feeble in their cellular, germicidal (or defensive) powers and thereby predisposed to succumb more easily to bacterial action The nature of tuberculosis then is such, that in its incipiency, when the first morbid process begins in the glandular system, in most of the organs except the lungs it can scarcely be detected, and even in the respiratory organs it is exceedingly difficult under most circumstances to be positive of its existence Most minute, rigid and repeated examinations are necessary for even a doubtful diagnosis if we wish for absolutely clear symptoms for it When we consider this fact in the presence of the usual clinical histories of the patients presented to the medical practitioner, it will be obvious to every one that the beginning of the treatment of this fatal malady is rarely when it is yet in its incipient form It is almost always when some marked structural changes have already occurred in some important organ or several of them, that the opportunity for the diagnosis of tuberculosis is offered Even if the bacilli are just making their appearance, it does not signify incipient tuberculosis as so many practitioners consider it, the disease is then already in an advanced stage of tissue alteration The bacilli do not appear in the sputum before changes occur in tissue Indeed, I feel sure that it scarcely ever occurs that a case of truly incipient tuberculosis, whether of the lungs or other organs, is purposely brought to a physician for examination, and when it does occur, it is either not recognized or the physician fears to express his suspicion

With these facts before our minds, we will be able to appreciate better whatever value or importance may be attached to the results that my colleagues and myself have obtained in the treatment of tuberculosis by the injection of blood serum, and what part, if any, the glandular system plays in this form of therapeutics Every one of our cases were in a more or less advanced stage of the disease

In January last, I presented to the St Louis Medical Society, a report of twenty two cases treated with immunized horse blood serum, in all of which there had been some improvement from injections practiced once a day on an average of two months In some instances weight had increased to a remarkable degree, and the symptoms of the disease were greatly improved It was, at that early period, the increase in weight was particularly striking, it having advanced rapidly to a degree beyond all expectations under the circumstances These patients were at the City Hospital and the poor-house, where the diet is exceedingly meager, and for a time were treated against their will and were discouraged in it by some one or other, so that there had been neither dietetic or mental influence playing favorably on their physique All of them improved in weight, varying from one and one-half to twenty-two pounds in three to eight weeks All of the twenty-two cases reported then are living to day, all of them have improved more or less since, and more than half of them have been discharged from the City Hospital, considered sufficiently well to do work These cases were in the second and third stages of the disease, had tubercular processes in one or both lungs, some of them with more or less infiltration softening spots, and some with large cavities In several cases there had been, to the beginning of our treatment, more or less severe hemorrhages, and in every case emaciation was more or less pronounced Bacilli of tuberculosis were present in all, and very numerous in the majority The average number of consumptives in the St Louis Hospital is between forty five and fifty We began with thirty cases, having taken one after the other in two rows of beds regardless of their respective pathologic conditions, which ranged from bad to hopeless Two almost in the last gasp when we began, died within three or five days Six were discharged because they rebelled the first or second week Twenty two we kept and treated almost daily from November 29 and December 1 to January 26, when I made my first report to the St Louis Medical Society The wards adjoining the patients treated with blood serum and where an average of thirty to thirty five patients are constantly present, new cases coming in as the old ones die, were subject to the ordinary treatment The number of cases in the latter wards between Thanksgiving Day, November 29, and April 15 was over thirty, while the deaths among our twenty two patients were not only *nil*, but half of them have, as stated before, been discharged on their own request to go home or to work These patients received no other treatment whatever than blood serum, and they were subjected to the most trying tests to see the actual results In the first place, after the symptoms of tuberculosis had subsided to a positive degree and the health improved unmistakably, as will be explained farther, the serum was stopped for two weeks, the weight began to decrease, and the symptoms gradually asserted themselves On the renewal of the injections, the bad features again began to yield During the course of three or four weeks more of serum treatment, smallpox occurred in the City Hospital As a consequence, sulphur was burned in the consumptive wards, and repeatedly afterward for some weeks in the wards beneath My experimental cases were in consequence forced to inhale the resultant acrid vapors, and to shift about in wards with open windows during the most trying, raw and damp weather we have in St Louis And yet, the improvement continued, interrupted, to be sure, by such a severe misfortune, but not arrested for any length of time in the majority The results have been to diminish the germs in number, disintegrate them apparently, alter the morbid secretion materially, clear up infiltrations, arrest hemorrhages, increase the avoirdupois, improve the appetite, arrest the cough very materially if not totally, and induce restfulness and quietness I have here three cases, two of which have undergone the above experience and one a long interruption of treatment

In surgical tuberculosis also, sero-therapy is very promising The following is a report of Dr Cale, surgeon, on a case he treated

"I inclose herewith, report of a case of knee-joint tuberculosis treated after operation with your anti-tubercle serum Mrs M, age 26 years, mother of two children, the youngest four months of age History of two tuberculous in her family Has enjoyed good health until one year ago, when she had some pain and stiffness in right knee Was treated for rheumatism by some physician until two months ago, when she called another physician, who made the diagnosis of tubercular joint and advised an operation I was called in consultation and found the right leg slightly flexed, joint swollen, but extremely painful on pressure, there was also ill defined fluctuation In fact, the knee presented a typical picture of tuberculosis The patient had fever and some night sweats and could not sleep without morphin

"I sent the patient to the Woman's Hospital, and found on opening the joint, the entire capsule in a gelatinous condition, also numbers of rice bodies in the synovial fluid, the cartilage almost dropped from the patella There was a cheesy tubercular focus on each side of the head of the tibia, which was removed with a sharp spoon An attempt was made to preserve the condyles of the femur to minimize shortening of the limb, but they were so degenerated that about one inch and a half had to be sawed off As is my usual method, a drainage tube was inserted, the wound closed and dressed before the removal of the Esmarch Patient slept well all night without a hypnotic The dressing was not touched until the eighth day, when sutures and drainage tube were removed Since that time (six weeks) the dressings have been perfectly dry and needed no change She has had an injection of 20 drops of serum daily for five weeks, her appetite is good she sleeps well and is gaining in flesh The case was a particularly bad one, and had I not intended to use the serum, I should have made a thigh amputation, instead of an exsection of the knee joint While conclusions can not be drawn from one case the use of the serum has undoubtedly greatly aided in the progress of this case I have made a large number of operations on tubercular bones and joints and have seen hundreds of others made, but it is certainly an exception to see such a result practically under one dressing"

THE PRODUCTION OF THE SERUM

The production of the serum is based on the known principle underlying immunization of animals The horse is naturally immune to a remarkable degree to the germs of tuberculosis It has been possible, very rarely, to inoculate the equine species, but not to produce any permanent disease, except in very rare (doubtful) instances, to say the least Acting on this knowledge, which I have verified with numerous experiments on the horse, consisting of inoculations of pure bacilli culture, it occurred to me that the physiologic resistance of horse blood serum to the action of the bacilli of tuberculosis and its products, could be so increased by a proper process of immunization as to render it valuable in therapeutics The results obtained verify apparently, the preconceived notion In a word, the process of immunization consists of the introduction into the horse of quantities of toxins, regulated by their action on the system, followed by the introduction of germs of consumption, in various states of alteration and dilution

One of the most important questions with reference to the production of serum, whether it be for tuberculosis or diphtheria, or any other disease, is the healthfulness of the subject used The horse seems to be the only one used for therapeutic purposes No animal of this family should be utilized without a thorough examination, and absolute evidence that it is not suffering from some organic disease or other, or from any functional disturbance which may produce any kind of toxic elements in the blood In any condition bringing forth changes of the physiologic processes in the system, whether it be during the course of an insidious malady, or a readily appreciable disease, or whether it be during the process of recuperation from a pathologic condition of any character, there exist in the blood, elements which, introduced into an alien body, sometimes produce very serious results And by the way, it seems to me that this point has been overlooked, so far as I can judge from the literature at my command, by the various experimentalists who have produced antitoxin In my experience, the various untoward phenomena which have been described as occurring after serum injections depend largely on conditions preexisting or created in the animal A thorough knowledge of the physiology of the horse is as essential for proper immunization, as a thorough understanding of the strength, nature, dosage, etc, of the agents of immunization Certain bad results in sero therapy, such as fever, may usually be prevented by proper care and choice of animals

THE SERUM

The serum produced from the horse, whether its immunity is increased or not, varies considerably according to the subject, according to the immunization process, and according to the number of successive times the blood has been drawn Consequently, uniform results can not be obtained in therapeutics unless the greatest care is taken in testing the serum obtained after each withdrawal of blood This is probably true of antitoxins for diphtheria There occurs a time after several séances of this character, when animal toxins are formed in the blood during the process of recuperation, and these, by injections in the human organization, produce untoward effects I have seen a high fever from a single injection of 10 drops of serum absolutely free from microorganisms and other products, and I have also seen the development of urticaria, erythema, and symptoms of arthritis and disturbances of the kidneys produced by serum which chemically seemed, and microscopically was, absolutely pure

DISCUSSION

Dr Paquin said—The operation of immunization is exactly that relied on in obtaining antitoxin for diphtheria It consists, briefly, of toxin injections until the fever ceases to rise, first of culture fluid, then injection of dead bacilli, until that ceases to produces a fever, then of living bacilli until this causes no fever When we do not produce any reaction to the germs, we consider that the horse is immune

Dr von Ruck of North Carolina—As to the immunization of the horse, I understood from Dr Paquin that he injected, in the first place culture fluid subsequently dead bacilli, and then the virulent bacilli Now, we know that a horse can acquire tuberculosis, in fact, there is no animal that is immune to tuberculosis I have very serious doubts as to the propriety of injecting the living bacilli into the horse, without killing the horse and making the most painstaking bacteriologic examinations I would by no means be understood that I wish to throw cold water on the merits of the investigation On the contrary, I realize how difficult this work is, how many obstacles there are in the way to discovering a true path where no one has yet trod Still I maintain that the therapeutic application of serum in the human system is entirely premature, as the experiments are not complete I hope that the treatment will be shown to be of value, and in our laboratories in Asheville, experiments are now being made with this serum One of the specimens of serum that Dr Paquin kindly sent us contained cocci, and we could not think of using it in a human being As to the results that are shown they are certainly in some respects very encouraging, but I must call your attention to the fact that those cases have all been in more or less advanced stages, they are *phthisical conditions* rather than tubercular cases If this is the specific medication, just the same as in the treatment of diphtheria with serum, and there are pathologic changes, you can not expect to remove the mixed infection, in other words, you can not expect to cure by specific *medication and at the same time* remove thereby the results as well About ten years ago I conducted a small institution in Ohio, for tubercular conditions We had no climate, except of the worst, but we obtained from 24 to 34 per cent of excellent results in the first and second stage Even in the first stage we *got some* good results One of the patients whom I examined in St Louis stated to me that before the serum treatment was begun he had gained seven pounds Clinical experience must be preceded by careful experimentation It is not an indifferent thing to inject the serum of any animal into a *human being* As to the cases which are present it would be useless to examine them now unless we had previously done so ourselves

Dr. DeLancy Rochester—I should like to refer those gentlemen who are reporting recoveries in tuberculosis, to Flint's original observations *in regard to tubercular* cases, in which sixteen out of forty four recovered without any treatment whatever Tuberculosis, according to his clinical investigations—I should say typhus, because it was typhus—was a disease which was of itself limited and tends to recovery, and that in a number of cases *they recovered without* any treatment whatever I would like also to emphasize the fact that in cases well advanced toward cavity formation, and in cases in which there are actual cavities of the lungs, we have not only a plain tubercular disease, but a mixed infection, and that the specific *treatment is to a great* degree out of place

Dr Holton of Oregon—I remember reading some time ago some experiments that were made in Geneva with treatment by the serum of the ass It was claimed that this was superior to the serum of the horse, and attention was called to the fact that consumption is rare where ass's milk is used as food In twenty-five cases which were reported, thirteen were said to have recovered, two had died, and nine were under treatment, not having been treated for a sufficient time to demonstrate the result I think that we want to take into consideration that there is still some question about how much the bacilli have to do with the trouble Experiments have shown that the juice of the muscle of an animal infected with tuberculosis, where there was no tubercle shown in the muscle at all, would on injection produce the disease It has been shown also by Ernst that the milk of cows infected with tuberculosis, where there was *no* affection of the udder whatever, and where there were no bacilli in the milk, would by injection produce the disease, that is to say, there were tissues in the juice of the muscle, and in the milk although the tubercle was not present in either of them, that produced the disease Now, does the *bacillus* happen to be there, with the other substance as an attendant, or with it as a cause?

Dr Paquin—I am rather surprised that Dr von Ruck has taken occasion to call attention to the fact that the serum was impure I expressly stated that this serum could *not* be expected to be microscopically pure, as it had not received the proper treatment There may have been *cocci* there The antitoxin of Behring contains microorganisms and yet *it has been used* A few of these do *not show that poison* will follow from injection He is right in saying that we must be exceedingly careful in the matter, but the samples which I gave him were *not intended* to be utilized except with the knowledge which I gave him that they had not been filtered *It seems to have been the object of the* speakers to make it appear that I claimed that I have proved the case at once I have made no such claim I have made a report, and it is so far true *Out of twenty two cases* we *have not* had a death Out of thirty five cases in the other ward, during the same period *there have been several deaths* As to microscopic work, I beg to say that I have a means by which a man can see spores from tubercle bacilli, it is my belief *that it is possible to do so I have read of the experiments* in Geneva, and I have tried the blood of the mule It seems to be little different from other animals They are, however, more subject to disease than the horse, more subject to disease which simulates rheumatism in men Dr Holton has mentioned the *fact that tuberculosis has* been inoculated from tissues not containing bacilli If this is the case, perhaps there were spores in that juice, and *they* were injected!

PULMONARY HYPERTROPHIC OSTEO-ARTHROPATHY

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10, 1895

BY N S DAVIS JR, A M, M D

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I have chosen this symptom group for description as it is one that has received little attention from American writers It has been my fortune to find but one case described in the literature of this country This was written by Dr Packard[1] and published in the *American Journal of Medical Sciences* for June, 1892 In European literature I find more than forty cases described during the last five years

The characteristic lesions were first pointed out by Marie[2] in 1890 and received from him their name His attention was attracted to these cases by the need of differentiating them clearly from acromegalia, which he described first in 1886 He found that many observers confounded these disorders which in some respects resemble one another Moreover he believed that the bone lesions of pulmonary hypertrophic osteo-arthropathy were always due to the absorption of a chemical irritant produced by a primary disease of the respiratory organs

The affection may be defined as a chronic multiple osteitis, involving especially the terminal phalanges, which are in consequence greatly deformed and the ends of the bones of the extremities These bone lesions follow a chronic disease of the respiratory organs

Almost simultaneously, Bamberger[3] of Vienna, described the same lesions, and assigned to them the same cause He, however, included among his cases, cases of congenital heart disease, which exhibited the same osseous malformations, although they could not be explained as due to the same cause Endeavoring to prove the correctness of his surmise, that this form of osteitis was the result of a chemical poison absorbed from the lungs, pleura or bronchial tubes, Bamberger introduced sputa from one of his cases beneath the skin of animals, endeavoring thus to produce the characteristic lesions, but he was unsuccessful The earliest and most widely accepted explanation of the clubbed fingers of congenital heart disease has been the existence of chronic cyanosis But need of well oxygenated blood will not explain the cases of Marie's disease for it is not a symptom of it

The fact must also be remembered that in most cases of congenital heart disease there are coincident chronic lesions of the respiratory organs such as passive hyperemia and bronchitis Since the original description of this group of symptoms by Marie, other observers have found them associated with other than lung diseases—with congenital heart disease, with syphilis, and possibly with caries of the spine It is evident, therefore, that the bone lesions can not be due simply, or always, to the absorption of a chemical poison from the lungs or pleura It is a fact, however, that in very much the largest proportion of cases, they are associated with chronic suppuration in the respiratory organs

Thorburn,[4] who has described several cases, all primarily of tubercular disease of the lungs, believes the lesions in the bones to be those of an attenuated tuberculosis This view is not sustained by other observers for in many instances sputa examinations do not demonstrate tuberculosis Mobius[5] has suggested that this form of osteitis may be due to a primary affection of trophic nerves, for a clubbing of fingers and enlargement of bones in the neighborhood of joints has been known to result from neuritis He describes one case in which only those fingers whose nerve supply was interfered with, were affected Orillard[6] has described a case in which there was the deformity of the hands characteristic of this malady, which he thought resulted from caries of the vertebral column, but even in this patient there was a chronic sero-fibrinous pleurisy on the right side Three characteristic cases have been observed associated with syphilis No lung or cardiac lesion was found in two,[7] [8] of them, and no cause of the bone affection could be assigned, except the constitutional disease In the third, which was described by Chretien,[9] gummata were found in the spleen, liver, and various organs of the body, and a cavity of irregular size, containing partly caseous and partly cretaceous matter, was discovered in one lung, as well as numerous small bronchial dilatations, which contained pus It is therefore doubtful in this instance whether the affection was not due to the coincident lung disease rather than to the constitutional one

We must conclude, I think, that pulmonary hypertrophic osteo-arthropathy is not a distinct disease as acromegalia is, but a symptom-group, oftenest coincident with chronic lung affections, rarely with diseases of other organs and with syphilis From the analogous action of some chemical poisons, such as phosphorus and arsenic, and the well known tendency of certain infections to involve bones and joints in inflammation, it is probable that this chronic osteo-arthropathy is due to a toxemia which finds its source in the respiratory organs when they suffer from certain chronic diseases It is best, therefore, to retain the appellation which Marie has given to this group of symptoms, remembering, however, that pulmonary hypertrophic osteo-arthropathy does not signify a pathologic entity, but an affection commonly associated with disease of the respiratory organs, although having at times a different origin

The symptoms can perhaps be best depicted by describing a typical case

A boy 4½ years old came under my observation a short time ago with the following history When about 1 year old he had pneumonia *Since that time* he has coughed more or less constantly, and has frequently expectorated large quantities of purulent sputa About one year after the primary pneumonia, his parents noticed that the ends of his fingers and toes became deformed by enlargement and that his wrists and ankles were increased in size to an abnormal degree He required shoes several sizes larger than children of his age usually wore His family history threw no light upon the origin of his malady His parents are poor and in consequence he has not had constant medical aid He appears as tall as children of his age usually do, fairly plump, his face is well shaped, although his expression is dull, his nose is short and somewhat broad, ear lobes a little thick, cheeks full, lips rather large, especially the right half of the lower one which is slightly pendent His teeth appear quite normal, and his jaws and tongue are not enlarged The skin on all portions of his body is smooth, soft and quite natural in appearance His neck is slender The thyroid and lymphatic glands about it are not abnormal His body is well proportioned There is no spinal curvature, although a dorsal kyphosis has often been observed in this affection as well as scoliosis Comparative immobility during respiration and enlargement of the left half of the thorax is noticeable The lower intercostal spaces on that side are not observed because of their distension, although readily seen upon the right side The apex beat of the heart is invisible Palpation of the chest reveals only the smoothness and distension of the left side On percussion the whole of the left side is found to be absolutely dull, both in front and behind, and from the clavicle to the bottom of the thorax On the right side, resonance is quite normal, except that between the third and sixth ribs, and extending about an inch to the right of the sternum there is an area dullness, due evidently to displacement of the heart to the right side The respiratory sounds over the right lung are strong and exaggerated, over the left lung they are entirely wanting, except just beneath the clavicle and in the upper half of the left inter-scapular region, where there is consonant bronchial respiration

It is evident that an effusion completely fills this boy's left pleural cavity and compresses the lung against the posterior and upper wall of his chest As he has been expectorating from time to time, large quantities of purulent sputa, it is probable that the effusion is purulent and has been partly drained through the bronchial tubes The effusion has existed at least a year, for as long ago as that, his parents were told that his left lung was useless There is no disturbance of appetite, digestion or interference with the functions of other viscera His parents say that at times he is feverish, especially just before and when expectorating large quantities of purulent sputa His pulse is quite normal as regards fullness, force and rapidity, and when seen by me there was no increase of bodily temperature The bones of the body are not deformed Nor are those of the upper arms enlarged But both wrists are considerably thickened and broadened There is no interference with the motions of these joints The metacarpal bones are not affected, but the first phalanges of the fingers are abnormally large, especially near the first finger joint The second row are little or not at all affected, but the terminal phalanges are enormously and most characteristically enlarged They are greatly broadened, and at the same time greatly thickened The nails are abnormally arched, both laterally and longitudinally, so that they curve over the finger ends like parrot beaks The last phalanx of the thumbs measures 6 c m in circumference and of the middle finger 5 c m The enlargement of the wrists and of the fingers is so great that it creates the impression of a general increase in size of the hands, although a genuine increase is not observable in the carpo-metacarpal regions Precisely the same changes are visible in the feet The ends of the toes, especially the big toes, are clubbed and greatly enlarged The ankles are considerably thickened, as are the bones about the knees The joints of the knees are not distended with fluid but the lower ends of the femurs are much enlarged The hands and feet are mobile but the knees are slightly stiffened There is no tenderness about the joints and never has been much

The parents of this boy say that he has rarely complained of pain, although there are times when he seems inclined to play less than usual In some other cases pain has been a prominent symptom It has, however, rarely confined a patient to bed, although it has often restricted the use of the extremities Pain is most apt to occur at the onset of the bone affection and is rheumatoid in character Although in a small proportion of cases the onset of these lesions is painful and somewhat abrupt, as a rule it is insidious A striking and characteristic feature of this malady is the symmetrical distribution of the changes in bones and joints

As yet it has not been possible to obtain samples of the sputa or urine of this patient for examination When urinalyses have been made in similar cases no marked abnormality has been found Legrain,[10] who investigated with unusual care the chemical composition of the urine of one patient in whom these lesions developed in infancy, and persisted up to the time of the examination, when he was 25 years old, found the quantity voided daily to be normal or only slightly increased Its specific gravity was normal, and it contained between 14 and 15 grams of urea per liter, about 13 grams of chlorids and 1 6 of phosphoric acid The proportion of earthy phosphates to alkalin phosphates was as 4 to 5 He found 07 of a gram of magnesia per liter of urine and 216 of lime This is twice as much lime as normal, in proportion to the amount of magnesia Legrain discovered that when acids were administered to this patient the amount of lime was increased still more He was led to investigate particularly the proportion of lime and magnesia voided, by some observations of Chabrie which he quotes, the latter found that the affected bones in this disease contained comparatively a small amount of lime salts and proportionately a large amount of magnesium

Post-mortem examinations of the bones have been made by Bamberger,[3] Therese and Rauzier[11] They find in varying combinations an increase of synovia, enlargement of the epiphyses, erosion of the cartilages in some of the joints and enlargement of the long bones just above the joints, and sometimes along almost their entire length, thickening and adhesion of the periosteum in places, and the formation of wart-like growths of new bone within the periosteum, occasionally also they have observed central rarefying osteomyelitis

These lesions may develop at any period of life, from infancy to old age, although oftenest in the earlier years of adult life They occur most frequently in males

Of affections of the respiratory organs with which this osteo arthropathy seems to be associated, tuberculosis, empyema, and bronchiectasis are the most common Cancer and sarcoma of the lungs with complicating bronchitis and pleurisy are among the rare concomitant affections

A diagnosis of pulmonary hypertrophic osteo arthropathy is usually not difficult The peculiar and characteristic clubbing of the fingers resembles no other affection, except the common hippocratic finger or drumstick finger, from which it can be distinguished by the involvement of joints and other bones than the terminal phalanges The close resemblance of these affections and their association with similar diseases makes it probable that the former is an exaggeration of the latter The shape of the terminal phalanges, the location of the enlargement of the other bones, their shape, the non-involvement of the cranial bones make it easy to distinguish this affection from chronic rheumatic arthritis, liontiasis ossea, gigantism, and the commoner tubercular or syphilitic joint lesions It is easier to confound it with acromegalia, although such confusion will not happen if close attention is paid to the characteristic symptoms of the latter disease In acromegalia the terminal phalanges and finger nails are not disproportionately enlarged and deformed, the fingers, as a whole, are uniformly and proportionately enlarged The same is true of the toes The metacarpal region of the hand, and the metatarsal region of the foot is much increased in size, especially in proportion to the wrist Kyphosis is usual, but it is generally cervico-dorsal, not dorso lumbar, as in this affection In acromegalia the inferior maxilla is greatly enlarged, and so protruded that the teeth of the two jaws often can not be approximated perfectly The nose, ear lobes, lips and tongue, are very much increased in size These deformities may interfere with speech, mastication and deglutition Acromegalia is also not associated with any disease of the lungs but with an enlargement of the pituitary body and consequently commonly with disorders of vision

Improvement in the bone lesions has very rarely been observed Moussous[1] saw one case due to empyema, in which drainage and thorough cleansing of the pleural cavity was followed by a diminution of the deformity of the fingers and toes Gillet[13] noticed similar improvement in another case, follow drainage of a tubercular cavity One[7] of the cases of supposed syphilitic origin also recovered after a course of specific treatment Another case has been reported by A Desmons[14] and W Binaud, which they treated by subcutaneous injections of tissue extract, made from the lungs of healthy sheep These injections were made for several months, without injury or noticeable discomfort to the patient The deformity no longer increased The patient improved in general health [6]And what was more noteworthy a thoracic synous which had persisted for years and grew out of an empyema that caused the osteo arthropathy closed perfectly At the same time, ease in the flexion of the digits and muscular power in the hand increased Motion in the joints of the feet and legs, became so much freer that the patient could walk without a cane, upon which he had long been dependent A single trial of so novel a treatment is suggestive but not demonstrative of its utility

The result of treatment in the case which I have described can not be related, for the child has come only recently under my observation, and as yet it has been impossible to execute the surgical treatment which is required Aspiration, and if the effusion proves to be purulent, as it seems probable that it will, thorough drainage of the pleural cavity is indicated By this procedure we may hope at least to stop the bone disease in its progress and possibly even effect a disappearance of it

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DISCUSSION

Dr S Solis-Cohen of Philadelphia—It has been my fortune to meet with two cases of the affection so well described in the paper, and to find in one of the cases a little more difficulty in discriminating the case from acromegalia than either my reading or the paper just laid before us this afternoon would seem to indicate The point, however, upon which from further reading and from a study of these cases I would be inclined to lay greater stress, is the broadness of the hand in acromegalia, as contrasted with the length of the terminal phalanges in hypertrophic osteoarthropathy In both instances under my notice there was associated chronic pulmonary tuberculosis in aged subjects It is quite common, however, to meet with kyphosis, and with the hippocratic finger-nail in these subjects, especially in the debilitated and poverty-stricken people whom we meet at the Philadelphia Hospital, and I have thought that the affection discriminated by Marié and described this afternoon by Dr Davis, is after all, as I think is Dr Davis's opinion, merely an expression of a commonly encountered condition If we were to class as pulmonary hypertrophic disease of the joints every case of empyema, or other suppurative thoracic affection which is associated with thickened terminal phalanges, with curved parrot-beak finger-nail, and so on, I think I could show two or three dozen cases at a moment's notice Therefore, I would lay stress upon the involvement of the wrist and ankle joints before consenting to the diagnosis of this condition, which is again a further point of discrimination from acromegalia, in which the wrists and ankles as a rule are not affected The condition is one of extreme interest, forming as it does one of the great group of affections to which clinical attention has so lately been directed, namely, the trophic results of chronic toxemias I use these large expressions, which are somewhat vague, for the reason that I have not yet determined, or I think are we in a position to ascertain just what the toxemia is, and just what the exact pathologic and etiologic relation of the affection is Still, it is trophic, in so far as it is a disturbance of of normal secretion, leading to excessive development of certain structures at the expense of others In these cases there is excessive development of the bony tissues, in rheumatoid arthritis also development of the bony tissues with destruction of others involved in acromegalia, excessive development of subcutaneous tissues in myxedema Here we have a large group of cases of perverted trophic conditions That all will be shown to be due to some error in embolism will hardly be doubted The evidence seems to prove that in this case it is some toxin, developed from the presence of pus within the body, whether that pus be formed in one disease or in another I have listened with great interest to Dr Davis's paper, and have learned a great deal from it

Dr Davis—At first I was somewhat in doubt as to whether this was not a case of acromegalia with which I had to do, because of the enlargement of the hands and feet, and also because of the dull expression of the patient, broad face instead of an oval one, and some thickening of the lips It was perfectly evident, however, on careful examination that there was no enlargement of the jaw so characteristic of acromegalia There was the characteristic enlargement of the terminal phalanges, but no increase in size of the bottom of the hand itself, and no broad thickening of the outside bony tissues The diagnosis was thus made clear in this case as one of pulmonary hypertrophic osteo-arthropathy Upon these features we have to depend in making our diagnosis

MEASURES CALCULATED TO MODIFY ACUTE INFLAMMATIONS OF THE RESPIRATORY TRACT

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7-10, 1895

BY H B SEARS, M D
BEAVER DAM WIS

No single remedy or measure can always be relied upon to afford relief in any acute disorder, as the disease itself is often but a climax in a pathologic process, the divergent lines from which, radiate to a series of inherited or acquired causes, the most important of which must receive consideration of him who would stay the process of disease or assist nature in restoring to health

Undoubtedly there are many measures utilized in therapeutics, identical in effect, also more than one way by which a pathologic process may be turned to a healthful issue

We find ourselves to-day confronted with quite a number of methods for treating acute respiratory troubles, each of which, undoubtedly, possesses merits peculiar to itself and well adapted to meet certain indications which arise in these affections, but that any one remedy or means can fulfill all the indications or be applicable in every case could not be claimed, much less substantiated One becomes expert in the use of a remedy or measure the same as in a certain surgical procedure, and one may also become blinded to the defects of a remedy or measure because of over-confidence in the same We can only become right eventually by comparison of thoughts and experiences

One urges us to use cold water locally or generally, one pilocarpin, another digitalis, others strychnia, another values hypodermoclysis, still others urge the expectant plan of treatment, combating a symptom here and there as it appears too prominent, asserting there is no way to shorten the inflammatory process and that the physician's duty is to watch, but act *only* when positive indications arise

The writer desires to call your attention in a general way to conditions found in asthenic cases, prostrated with acute respiratory inflammations Infancy and old age claim the larger share, but all ages furnish us with examples Reference is made to the whole respiratory tract, because all parts suffer more or less in common, and treatment for one part is not wholly inapplicable to the rest of the tract, weakness or vigor having their respective influence upon the whole tract much the same The intention is to look at the subject from a normal anatomic and physiologic standpoint, noting the variations in local nutrition and elimination and instituting treatment, in part influenced by the conditions existing just previous to the onset of the acute inflammation, and taking into consideration microorganisms or their chemic products only so far as defective nutrition in a part offers to them a suitable feeding and propagating ground

All but a small percentage of the deaths in acute respiratory inflammations result either from excessive secretion of mucus or heart failure These facts led the writer to look for prompt means of checking secretion in the respiratory tract, also those calculated to bring about the best possible heart action, appreciating the fact that not only healthy tissue metamorphosis but also the excessive changes occurring during the inflammatory process are much influenced by the condition of the heart and capillary circulation Every practitioner of experience has, probably, been impressed with the tenacity with which bronchial catarrh clings and the slowness with which resolution takes place *in the lungs of subjects having a* sluggish circulation *We have of these two main* classes first, the spare or poorly *nourished in whom* vitality is generally low and with whom the matter of nutrition is the subject of all importance, everything else being secondary thereto, second, a class not feeble in appearance, for they look full blooded and well nourished, but when your finger touches the pulse you perceive it is small and rapid They are short of breath and a degree of cyanosis is present in the extreme cases You may discover a heart murmur and you may not Râles may be heard here *and there over the lungs*, quite frequently even when *they feel their best* They have great thirst and demand large quantities of cold water, or something else, to quiet the inward burning We will not go into further detail or speculate as to the different lesions which may have brought about an approximate of this condition They are not confined to any age or condition in life The defect in the power of the heart (from whatever cause) has brought about varying degrees of blood stasis, so that the venous system and lymph channels can not unload themselves nor remove the transudation which has occurred into the tissues of the lung Elimination is *much interfered with* as well as nutrition In these cases pilocarpin *would be dangerous* and heart stimulants alone would, ordinarily, fail to accomplish the desired results The too common advice to give your fever patients an abundance of cold water (in these cases above all others) would, in the writer's opinion, but make their death more sure

This condition, against which we are striving, is begotten of a feeble heart and an over-abundance of fluids, which, on account of the lack of tone in the circulation fails to be thrown off by way of the kidneys Heart stimulants alone might relieve the edema of the tissues by unloading the distended veins and lymph channels, *provided the condition of the* heart would allow that degree of *forcing, but there* would be great danger of exhausting or *injuring it* before the work was accomplished What seems to be needed first in these cases is depletion, not with *the lance* (although that might be a successful measure), but by catharsis, vigorous in proportion to the degree of stasis and depletion needed Then the heart stimulants or tonics will work like a charm, diuresis will be induced and the dilated veins and lymph channels can easily be brought to an approximately *normal condition, relieving the* tissues of surplus serum and waste products Then the exhibition of remedies lessening *secretion in the respiratory* tract, together with those having a tonic *effect* upon the vascular and nervous systems will, as general measures, do much to avert the dangers which await adynamic cases prostrated with bronchial and pulmonic inflammations

If this is done we feel that the advice favoring the use of emetics in children and the lance in adults when dyspnea and cyanosis supervene, will not often be needed By emesis we temporarily relieve the collection of mucus, but excite renewed secretion, very likely necessitating a repetition of the dose, each time increasing the fatal tendency By bleeding, some of the resistance to the weakened heart is removed, together with waste products, also valuable corpuscular elements of the blood, which will be sorely needed in convalescence should that stage be reached All of this could be more safely and as surely *accomplished by derivation by way of the bowels and kidneys, and the exhibition of heart stimulants and tonics, without the loss of valuable tissue* elements

The condition of the heart and capillaries should determine the use of heart stimulants as well as the efficiency of elimination, also the amount of fluids which the case will bear When heart tonics are most indicated abundant fluids, *most certainly*, are not

Ingestion of fluids does not of necessity increase tissue change or elimination With a vigorous circulation the ingestion of water may flush emunctories, assisting greatly the throwing off of waste *products*, but *if the circulation* be weak, the accumulation *of fluids in the body tends still more to* embarrass the already *failing heart*

Julius Glax made special observation in fifty three cases of fever, endeavoring to determine if the human body retained water in the tissues during fever or is deficient in water The amount of water ingested was noted, also the amount of urine passed (cases in which diarrhea was too free were excluded) He concludes that there is a conservation of water during fever, with an increased elimination in convalescence His explanation is, that at the onset of the fever while the blood pressure is yet high, the diuresis occurs, but a diminution ensues as the pressure becomes lower and a still later increase as strength returns An increase in the ingestion of fluids increases the elimination in most cases *only* after defervescence has begun, while during the height of the fever, diuresis appears to be more favorable the more limited the ingestion

The writer would offer, as applicable in many cases of acute respiratory inflammation, the prompt exhibition of belladonna and turpentine for the purpose of abridging or modifying the local process They have seemed to prevent excessive secretion of mucus in bronchitis as well as lessen the amount of exudation in lung inflammations, and, in conjunction with an effort to maintain the best possible circulation of the blood, have yielded results which encourage the writer to bring the subject to your notice

In the early stage of respiratory inflammations, before excessive secretion begins, they seem to soothe the mucous surfaces and prevent much trouble If secretion is already considerable, derivation by way of the bowels, together with the toning up of the heart will enable them to check the secretion of mucus, prevent accumulation in the dependent portions of the lung, or extension of the inflammation by contiguity In children and feeble subjects this is a *matter of no little importance*

Digitalis, as a type of heart stimulants occupies a very important place among the remedies utilized in combating respiratory inflammations, but it should not be forgotten that observation indicates that with high temperature or edema it is not absorbed, or, at least, is ineffectual *until the temperature* is reduced or the edema somewhat relieved by purgation An additional advantage of the above *mentioned* plan of treatment, is that anodynes and antipyretics may be given with greater safety when indicated

PRE-COLUMBIAN LEPROSY

BY ALBERT S ASHMEAD, M D
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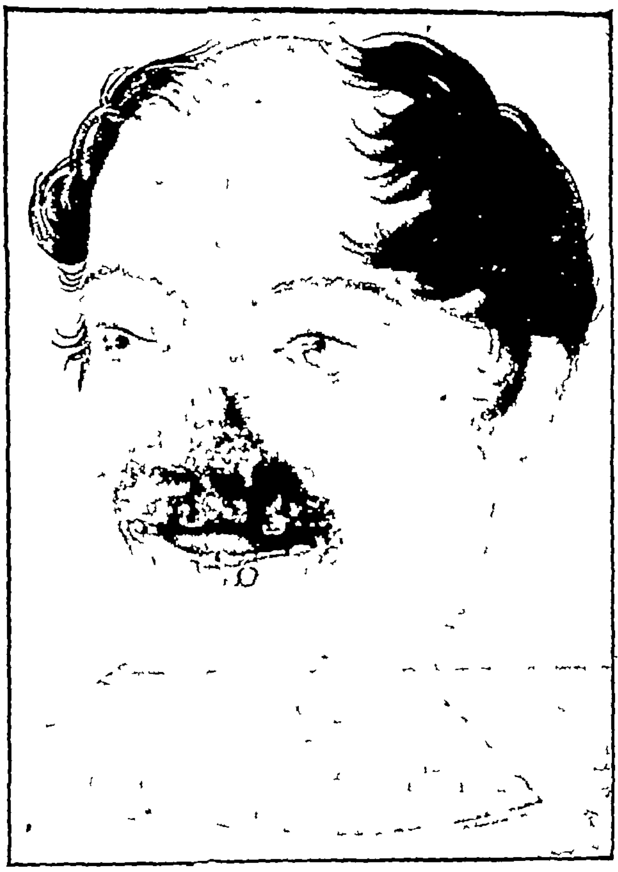
NEW YORK

(Concluded from page 807)

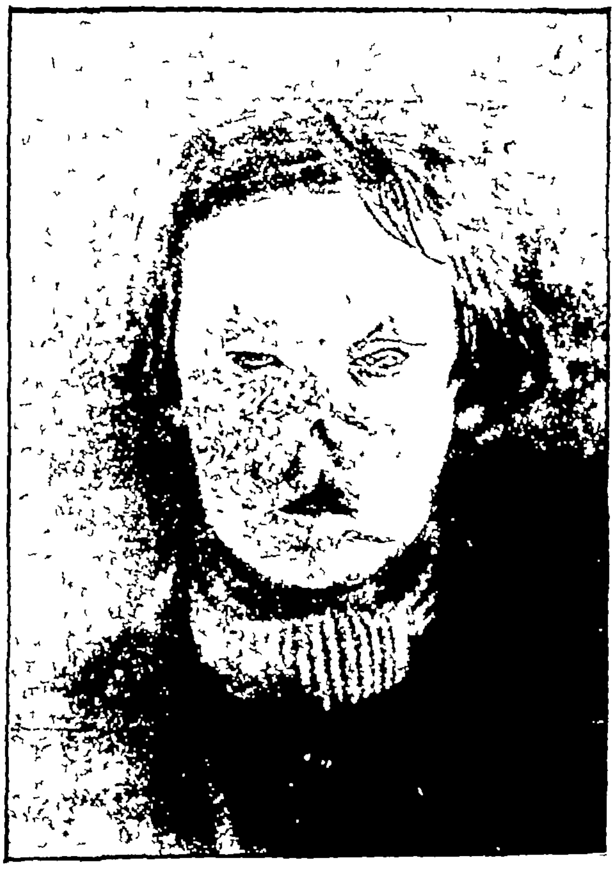
I print here, side by side, photographs of loss of nose deformation by lupus, by syphilis, by leprosy The leper apparently has lost his upper lip, with his nose This last is taken from Leloir's well-known work I also print the characteristic deformations of fingers and toes of lepers, according to photographs sent me by Dr Morrow I print also photographs of *huacos* pottery, representing deformations Also a photograph showing leprous tuberculation of the face This mutilation of the fingers, and this tuberculation of the face, are the most striking features of the disease Is it not probable, therefore, that if those ancient Peruvians had intended to represent leprosy in the *huacos* pottery they would have shown a tuberculated face or a deformed hand?



Destructive lesion of nose and upper lip, typical of syphilis Pl 122 Clinique de la Maladie Syphilitique Par M N Devergie Paris, 1826 Ulcers roug du nez des levres des palais et de l'arriere bouche avec carie des os

There lives in France (Béarn), in the Pyreneean regions, a class of people called Cagots, who have deformations of the finger- and toe-tips, elevated and arched nails, fissures and cracks, sometimes ulcers of the epidermis and ungual matrix, a reduction of hair, more rarely certain deformations of the phalanges, and some anesthetic cutaneous patches M Magitot and M Zambaco have studied these deformations and consider them as being of a leprous nature, being supported in this theory by historical documents, local traditions and other proofs, etymological and philological These people represent an instance of survival in extreme attenuation of the genuine leper, so widely spread in southwest France from the thirteenth to the sixteenth century

In the Academy of Medicine, of Paris, 1893, in a discussion on leprosy, and on the question, "Are there in countries reported non-leprous, as France and especially in its northern regions, also in Paris, vestiges of ancient lepra?" M Leloir mentions a case of multiple cutaneous gangrenous plaques connected with a lesion of the nervous system, which might have been lazarine lepra He also, in his report, refers to what he said previously on leprosy in Norway, and quotes three cases, in which the diagnostic of lazarine leprosy was imposed "In these three cases," says he, "we are in the presence of French patients, born in France, of French parents, and who had never left their own country (Paris and the Department of the North) Certainly if these patients had lived in leper countries one would have found the diagnostic of the mutilating lepra, the lazarine lepra As it is, these affections, are simply called problems *Are not these degenerated leprosies vestiges of the lepra of old?"*



Lèpre tuberculeuse devenue tropho neurotique, lepre mixte variété tuberculeuse systematisee nerveuse Lèpre Norwegienne Traite de la lepre, par Leloir Paris, 1886 Pl xi

Leloir, at Lille, in two clinics, showed four cases of unnamed affections, simulating systematized nervous lepra, or mixed lepra The first of these accidents was that of a man born in the vicinity of Cambrai, who had never left the region of the north, and presented all the symptoms of systematized nervous lepra

The second was a thresher, 46 years old, pensionnaire at the General Hospital, born in the vicinity of Bergnes, he had never been a soldier and had never left French Flanders This patient presented in the highest degree the characters of the systematized nervous lepra M Leloir made the histologic examination of the pus taken from the cutaneous ulcerations, and from a small fragment of skin bordering on an ulceration, he found nothing characteristic He found two bacilli, showing the histo chemic reactions of the leprous bacilli, and tolerably well their characters, "but you know," says he, "how abundant the lepra bacilli generally are in leprous tissues"

The third observation concerns a shepherd, 66 years of age, born near Fauguembergnes (Pas de Calais), who had never left Artois and the Flanders

The fourth observation was the case of a woman aged 58, who had never been outside of French Flanders This was a quite remarkable case of systematized nervous lepra At the autopsy, pronounced alterations of the nerves of the limbs were found

Leloir mentions another case, in 1892, a patient of his service, born near Dunkerque, and who had never been outside his native country, he was affected with trophic troubles muscular and cutaneous, resembling much, in certain respects, those caused by the systematized nervous lepra, but probably of syringomyelitic origin, this gave occasion to M Leloir to agitate again, in a clinical lesson, the question as to the persistence of the vestiges of ancient lepra in France

Huacos pottery showing characteristic deformation Wine or water bottles exhumed with pre Columbian Peruvian mummies, (Chaucan and Champeco) Bandelier collection American Museum of Natural History

"Taking ground on the phenomena observed in those subjects," says M Leloir, "I remarked in 1885, in my clinics at the Hospital Saint Sauveur, that in these five observations we have to deal with subjects affected with lesions which resemble much those of systematized nervous lepra, deforming or mutilating; those of the systematized nervous lepra at the period of the achromic and hyperchromic specks, of the lepra called lazarine (systematized nervous lepra with leprous erythema, pemphigoid and escharotic) and finally, of mixed lepra"

Were these cases of true leprosy, as one would certainly be inclined to believe at first glance? But, if so, where was the lepra contracted? This objection, Leloir says, might, however, be discarded, if we supposed ourselves in the presence of autochthonous lepra, of vestiges of the ancient lepra which covered Europe, and France especially, up to the middle of the fifteenth century He emphasized once more the fact that quite possibly a disease, which at the death of Louis VIII (1229), had necessitated the creation of 2,000 leproseries in France, and of 19,000 throughout Christendom, had not entirely disappeared from the countries where it was believed to have been extinct for centuries

He adds, however, that such a theory could not pass from the domain of hypothesis, to the domain really scientific, unless the ken of future observers can be connected in an incontrovertible fashion with lepra, on the basis of a careful clinical, anatomopathologic and bacteriologic study

Now in the five observations which furnished a basis for his communications, and his lessons, if the patients had much in common with real lepers, it must nevertheless be confessed that certain clinical details, (for instance, the absence of paralysis of the orbicularis of the eyelids, with anesthesia of the face, etc) did not tally exactly with the lepra diagnostic, and that there was no bacteriologic criterium at all

"It might, however," says Leloir, "be conceived possible that these cases of autochthonous lepra, vestiges of the ancient lepra, *presented themselves* to day under an aspect slightly modified, the disease having, as it were, degenerated since the Middle Ages"

M Leloir thanks M Zambaco Pacha, for giving fresh support to the hypothesis expressed by the Lille professor, in 1884, 1885 and 1886, by his works on the Cagots of Bretagne Only, he thinks that M Zambaco's labors do not give us the decisive, conclusive proof of the persistence of ancient lepra in the individuals described by him "Until he finds in them, Hansen's bacillus, one must be allowed to doubt, in fact, one must doubt

"I content myself with referring to the Chapter 'Diagnostic,' of my Treatise on Lepra, where it will be seen how difficult the diagnosis of this disease is sometimes If what I say in that chapter, and what I said in 1889 in the *Annals of Dermatology*, in speaking of a patient of my service whose observation was published by my interne, M Baade, and subsequently published again by M Thibierge in the *Medical* Society of the Hospitals, is true, if lepra can be *present* unperceived before the most experienced doctors, if they are not perfect leprologists, it is not less reciprocally true that we must be extremely cautious, lest we confound several quite different diseases with lepra This is especially to apply to the systematized nervous lepra, a *real* specific polyneuritis, which may be easily confounded with a number of affections of a tropho neurotic origin

"As I said in my Treatise on Lepra, it can easily be conceived that as *systematized* nervous lepra is nothing but a specific polyneuritis, *many* affections of nervous origin are confused with it But even this specific character of the leprous neuritis is cause that in its character, in its evolution, in its dissemination, in its localization in certain nerves, etc, it presents characters so different from those we are used to observe, such a special stamp, that in general the diagnostic will be easy enough for a physician who knows something about systematized nervous lepra

"I will conclude in a few words

1 "As I have shown with regard to the region of the North and for Paris in 1884–85 and as has been

shown in 1892 by M Zambaco-Pacha for Bretagne, there are in France persons affected with nameless diseases, bearing a strong resemblance to lepra

2 "As I asserted in 1884–85, and as has been affirmed in print by M Zambaco-Pacha in 1892, it is possible that we are in these cases confronted with vestiges more or less degenerated of the ancient lepra, which had invaded all France and Europe in the Middle Ages

3 "This theory is plausible, suggestive, but it is still in want of a scientific demonstration founded on a set of facts carefully observed and carefully described from an anatomo-pathologic and bacteriologic point of view "

Thus we see that, if we had cases with such deformations as may have existed in Peru, and which the *huacos* pottery is claimed to represent, not even that would be sufficient proof of the existence of leprosy, as long as mutilation of hands and feet, and tuberculation of face, were absent Evidence of trophoneuritic destruction is not sufficient to make us assume leprosy Nor would even syringomyelia, if it is existent in British Columbia, be proof of the existence of leprosy in pre-Columbian times

There is a little pamphlet, published in London, 1889, by a member of the American Ethnological Society, it is entitled "Tepeu the Hypothetical Migrations of Morbus Americanus " Tepeu is the Quiché name for syphilis, meaning also nobility The author claims that the investigations among the Natchez, and the mound-builders of the Cumberland Valley, established one point that the latter were the subjects of a constitutional malady, which produced certain textural changes in the osseous tissue, a malady which may or may not have been syphilis, but which was incontestably like syphilis in its pathologic lesions and may therefore have been lepra, " the pathologic counterpart of syphilis and by some writers regarded as essentially one with it "

I have myself attempted to show in an article entitled " Leprosy in America before the Advent of the Spaniards and the Negroes," published in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, December, 1894, that the disease, leprosy, did not exist among the ancient Aztecs The Natchez are supposed to be a connecting link between the mound-builders of the Mississippi Valley, and the ancient Aztecs If the Natchez had been lepers, the Aztecs would have been lepers Now, as I said in that article, and as Dr Brinton stated before, the word *lepra*, to the ancient Spaniards, and the word *teococoliztli* to the ancient Aztecs, meant the same disease, which undoubtedly was syphilis From which we may certainly draw the conclusion that the pathologic lesions in the remains found in the Cumberland Valley are more likely to be attributable to syphilis than to leprosy

Mr Henry C Mercer, Curator of the Section of American and Prehistoric Archæology, University of Pennsylvania, who has just returned from an exploration in Yucatan, says that he could not discover any proof of the assumed great antiquity of the Mayas, or of their migrations, he is inclined to hold quite opposite views "The interment vase," says he, "must be proved to be pre-Columbian, if it is to be of any use in the argument, and this is not an easy matter I am not altogether," says he, "satisfied with the syphilitic bones from Tennessee, but am open to proof I know how collectors 'collect,' and should want to be sure that Bandelier had dug up the Peruvian vases himself, and studied the whole interment I found some crania on the eastern shore of Maryland not long ago, in an ossuary, which Dr Harte, of the University, after examination says are syphilitic, but the ossuary may not be pre-Columbian The description of these is already in MS I know the need of exact archæologic work in Central and South America, where the first object has been to discover startling facts and 'beautiful specimens,' and trust you will be very careful in making use of what has been sent up to us by enthusiastic collectors "

I may say here that these *huacos* potteries which have been sent up by Mr Bandelier are said, by competent archæologists, to be pre Columbian Certainly, one of them, if dug out of a grave twelve feet deep, which contained a Pachacamac pre-Columbian skull, showing a syphilitic lesion, diseased frontal and parietal bones, must have some relation to the same skull, that is, represent the disease apparent in it[*] This cranial lesion is certainly due to syphilis The plates in Devergie's " *Clinique de la Maladie Syphilitique*," Paris, 1826, present caries and necrosis of the frontal bone, of the nostrils and superior maxillaries, following chronic syphilis, exostosis and caries of the frontal bone and of the cheek bone, and its surrounding parts, caries of the frontal bone, nasal bones and ethmoidal bones, developed under mercurial influence, and a process of healing, exfoliation of internal table of the frontal bone, followed by caries and necrosis of that bone These lesions are peculiarly syphilitic In the same atlas will be found plates showing destruction of the nose and upper lip, strikingly like the deformations on *huacos* pots, scars of carcinomatous and rodent ulcers (syphilitic) occupying the left wing of the nose, almost totally the upper lip and left cheek, with caries of the cartilages of the septum, and the wing of the nose, rodent ulcers of the nose, lip, palate and of the throat with caries of the bone, irregular cicatrices of ulcers of the head, tuberculous and ulcerous cicatrices, with total loss of nose, tuberculous ulcer, loss of nose through the progress of ulceration caused by syphilis, consecutively developed after treatment by mercury, cicatrices of ulcer of the head, *and others of the face*, thought to be syphilitic, with caries of the upper jaw and the nose

These lesions are identical in appearance with the lesions to be found in the *huacos* pottery There is but one loss of nose, and apparent loss of part of upper lip, of a leper represented in Leloir's " *Traité de la Lepre*," Paris, 1886 The title of this plate is "Tuberculous lepra changed into tropho neurosis, mixed lepra, variety systematized nervous tubercular leprosy in a Norwegian " This is not like *huacos* pottery, because there is typical leprous cicatrization and contracture of the connecting link of flesh between the lip and the lost nose It is not a loss of lip Besides, there is the usual leprous stenosis of the oral aperture, and general facial atrophy These characteristics do not appear in any of the *huacos* specimens Moreover, in the dry or atrophic form of leprosy, the only form which these vases could possibly represent, we should have crooked or mutilated fingers, *and deformity of eyelids* which in these vases never appear

One thing more to have the lepræ bacillus from a leprous country, say India or China, it is not only necessary that the bacillus be transported in a human body, but that the condition of life of the human body itself should be transported also This point has been clearly explained by Hansen in his investigations on the conditions of leprosy among the Norwegians emigrating to Wisconsin and Minnesota He found that while a number of lepers (of course not known as such) had emigrated, in no case did he find a second generation leper, or that a case of leprosy had developed here from Norway not imported He asserts that the reason of it is that their habits change, that their conditions of life are not the same as those in Norway, and that therefore the conditions necessary for the life and well-being of the bacillus are absent

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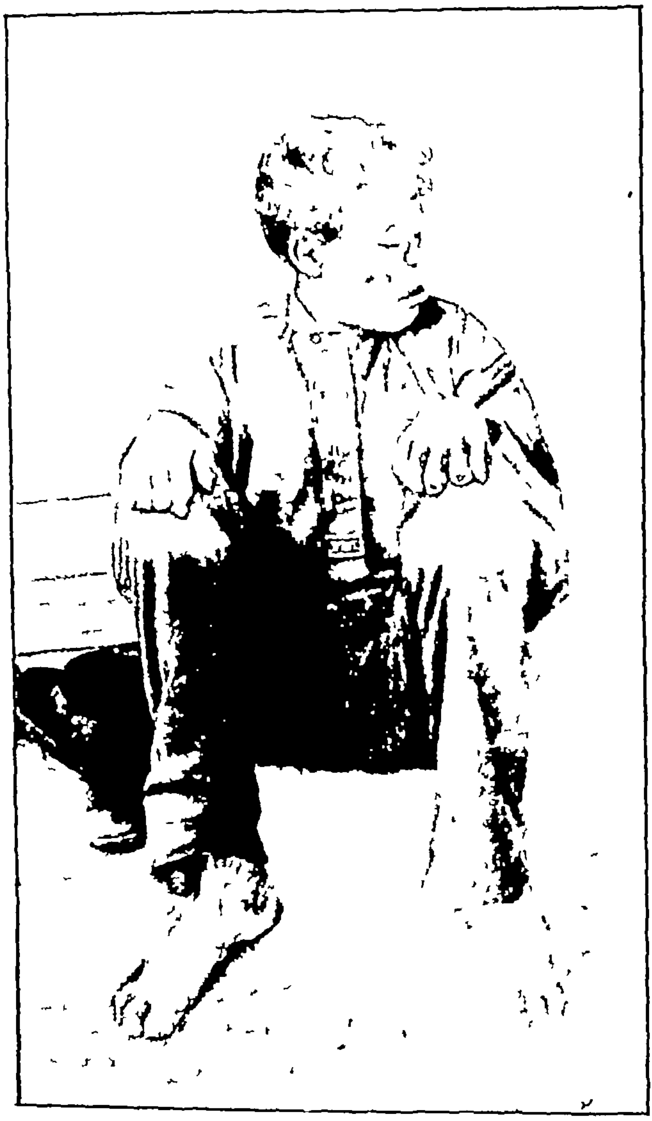
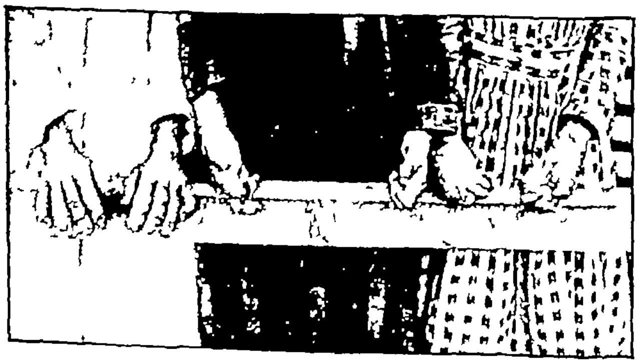
[*] NOTE —I have written to Mr Bandelier for the exact facts





Deformation of fingers and toes, from Dr Morrow's collection of photographs

CONCLUSIONS

So far as I have investigated this subject, I consider myself justified in saying 1, syphilis and tuberculosis are pre-Columbian, 2, that any deformation on American pottery would be more likely to represent lupus and syphilis than leprosy, 3, the pottery upon which the supposed leprous deformations appear, is beyond doubt pre Columbian

Note —I may say here that I have examined many bones, in a disintegrated condition to be sure, dug up at Ilujon, Bolivia five miles over the Peruvian line at a place called Tiahuanaco also two skulls at the same place, which probably are not so old as the disintegrated bones These latter two skulls have the peculiarity of an open suture running down from the coronal suture of the forehead to the root of the nose These skulls are like the bones I mentioned, not only pre Columbian, but pre Inca In none of these is there any evidence of leprosy or even of syphilis What makes us look with some suspicion of leprosy at these Tiahuanaco bones in Bolivia is the probable relationship between the Micmacs of Nova Scotia and the Tiahuanaco races of Bolivia The Micmacs are supposed to have come north from the southwest and to have had relations with the Navajo and Apache Indians and also with Peru Yucatan and Mexico Whether the endemic leprosy of Nova Scotia supposed to have come with the Bretons, is at all connected with the Micmacs remains to be seen

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SOCIETY PROCEEDINGS

ILLINOIS STATE MEDICAL SOCIETY

Abstract of the Proceedings of the Forty fifth Annual Meeting held at Springfield, May 21, 22, 23, 1895

First Day—Morning Session

The Society met in Central Music Hall, and was called to order by the President, Dr Daniel R Brower, of Chicago, at 9 40 a m

Prayer was offered by the Rev F W Taylor, of Springfield

The report of the Executive Committee was made by the President

After the transaction of some routine business, the general session adjourned, and Section 1 was called to order

Section I

Practice of Medicine, Medical Specialties and Therapeutics

Chairman, Dr E P Cook, of Mendota

Secretary, Dr J T McAnally, of Carbondale

The Chairman made a few remarks introductory to the work of the Section, after which he called for the reading of the first paper, entitled

LITHEMIA,

by Dr C W Hall, of Kewanee The author said there were three reasons for selecting this subject 1, because its importance is not appreciated, 2, because it occurs much more frequently than is generally supposed, 3, because it is a condition medicine will remedy Cases of lithemia generally present themselves with a history of long-standing ill health Medicine seems to help for a little while They complain mostly of indigestion The health of these patients has been failing for a long time They have no appetite, and when they do eat they wish they had not, for a heavy, loaded sensation follows eating which in time causes great distension of the bowels due to gaseous fermentation Food is oftentimes vomited and it is very sour Bowels are constipated General weakness is present Patients have no desire for mental work, they feel blue and despondent, and this latter condition varies with the amount of gaseous distension Pain is generally present in the region of the liver or stomach and in the region of the kidneys An empty faint feeling in the stomach before eating accompanied with dizziness and headache The author emphasized the pain felt in the region of the kidneys This pain takes a course down the ureters, the ureters being rather tender to the touch The pain also extends to the meatus urinarius, and the urine smarts and burns The urine is always highly colored and when cool very cloudy We have a brownish smoky color of the urine, and sometimes a reddish deposit Litmus paper gives a decided acid reaction The cause of this is an improper oxidation of albuminous substance taken as food The gastric secretion in lithemia is especially affected and gastro duodenal catarrh is probably the most pronounced symptom of the disease In the treatment the author never fails to give almost perfect relief by the administration of nitric acid C P and phosphate of soda C P Nitric acid is given before meals in one or two drop doses in plenty of water, this lessens the acid secretion of the stomach It is a great oxidizing agent, stirs up the torpid liver and is probably the best all round medicine to give in this disease The sodium phosphate is given in the middle of the morning, afternoon and at bedtime, which acts very favorably on the catarrhal condition of the stomach and bowels It neutralizes the acidity and dissolves the mucus For gaseous fermentation the author gives creasote and assafetida with good results

Dr E Ingals, of Chicago, contributed a paper on

SOME OBSERVATIONS ON MODERN THERAPEUTICS

which was read by the Secretary of the Section in the absence of the author The paper stated some facts that indicate the very weighty obligations under which we rest for some modern discoveries in therapeutics Therapeutics was defined as that branch of the science of medicine which treats of the properties, powers, action and modes of application of such agents as will prevent, ameliorate or cure disease To learn that there was such a disease as cowpox, that it caused but little discomfort to the patient and left behind no harmful sequelæ, and that it rendered the system immune to smallpox, was, he thinks, the most important discovery ever made by man It has added millions to the number of inhabitants on earth, it has given them exemption from suffering and has greatly augmented their wealth Therapeutics requires very careful study, for there is no department that is more difficult to master With most medicines it is impossible to determine by any scientific rules how they produce their effects We know how some antidotes and antacids are curative, for their action is chemical, but in general we acquire this knowledge through empirical observation We would never suspect from any examination of the medicine that morphia would compel sleep or allay pain, strychnia cause convulsions and death, that ipecac would produce emesis, or veratrum slow the action of the heart, except by administering them and observing their effects, and these effects are not uniform for they will differ as they are influenced by individual idiosyncrasies, or by the varying substances they meet in the stomach or in the circulating fluids, and sometimes by vital forces that we do not understand For these reasons therapeutic skill is only to be acquired through the most pains taking study and observation, but if these are given it will abundantly reward a student for his labor

Dr Arthur R Edwards, of Chicago, read a paper on

THE DIFFERENTIAL DIAGNOSIS OF UREMIA AND ORGANIC BRAIN LESIONS, ESPECIALLY MENINGITIS, WITH REPORT OF OBSCURE CASES

Uremia is usually readily differentiated from organic cerebral disease, yet confusion may arise in atypical cases The main rule in diagnosis is to assume that uremic intoxication is the cause for nervous symptoms in nephritic subjects only when other causes can be excluded Preëminent importance attaches to the presence of albumin, casts and to the amount of urine, although 1, nephritis may be unattended by albuminuria, 2, casts may be permanently absent, and 3, uremia may intervene when the amount of urine and urea is normal (Citation of case of chronic parenchymatous nephritis in which casts without albumin were present) If uremia is due to cerebral anemia, we must guard against confusion with cerebral anemia from other causes, but such albuminuria is transitory and unaccompanied by casts Conspicuous cardio vascular symptoms are valuable diagnostic adjuvants and yet not worthy of absolute confidence (Citation of case of albuminuria and cardiac hypertrophy in which the clinical diagnosis was uremia while the autopsy disclosed meningitis and arterio-sclerosis) Numerous alterations in the pulse may involve differentiation The retinal findings are most important, for retinitis albuminurica is rarely absent in chronic nephritis leading to uremia In certain cases the diagnosis is more difficult than that of any other cerebral disease Uremia and meningitis have many symptoms in common—headache, convulsions, coma, dyspnea, vertigo, etc Confusion is almost inevitable when partial contractures, focal paralysis, and temperature occur In such cases the most experienced diagnostician errs Broadly speaking, circumscript convulsions and paralyses speak strongly for anatomic changes in the central nervous system, although they may rarely occur in uremia This point is scarcely recognized in the literature and the author of the paper collected published instances and reports four cases of his own, in which the most diverse focal symptoms appeared in uremia—crossed paralysis, ptosis, strabismus, temperature, delirium, hemiplegia, etc The multiplicity and incongruity of the symptoms were best reconciled by a diagnosis of meningitis In all the instances there were no microscopic changes in the brain, edema cerebri alone being present Unusual focal signs may exceptionally occur in uremia Convulsions may occur in one half the body, opposite half of tongue and arm Trismus, nystagmus and grinding of the teeth have been recorded Rigidity of the neck, so common in meningitis, has occurred in uremia with consequent confusion in diagnosis Opisthotonos, extreme in degree, complicated a plain case of uremia Paralyses are rare and usually transitory The combinations are manifold Hemiplegia is the most common form, but exceptional combinations are found, *e g*, 1, crossed facial paralysis with hemiplegia, 2, crossed oculomotor paralysis and hemiplegia, 3, paraplegia, 4, hemiplegia with aphasia, amnesia and deafness, 5, hemiplegia plus nystagmus, diplopia and aphasia, 6, paralysis with conjugate deviation or glossoplegia, 7, tonic local spasticity with focal paralyses In short, the writer has been able to find instances in uremia of almost every focal symptom or sign observed in disease of the central nervous system, combined in infinite variety and simulating the most diffuse intracranial processes

TYPHOID FEVER

A paper was read on this subject by Dr D W Aldrich, of Galesburg The author believes that the typhoid bacillus is an important factor in the disease, that it may be taken into the system through the mouth, air passages, and possibly the skin, that the spleen, liver, and intestinal tract afford soil in which to incubate and develop a crop of the bacilli which may prove to be master of the situation a few days or weeks later on Typhoid fever is a disease of many symptoms or of few Where the bacilli are not in any manner interfered with, the symptoms are many and severe in the extreme But it is possible to interfere with the development and action of the bacilli in such a manner that their presence in the system is scarcely recognized by the symptoms they produce It is for the purpose of bringing about this change that the physician is called in the case Since August 1, 1890, it has been the author's custom when called to see a patient with typhoid fever, if the stage of incubation is not passed, to apply ice water or ice bags to the abdomen for a period of twelve to twenty-four hours, with a view to interrupting what he presumes to be the incubating process, first using cloths wrung out of tepid water, gradually lowering the temperature until at the end of one hour, ice water or ice bags are used It has also been the author's custom to administer carbolic acid and iodin with a view to disinfecting the alimentary canal, destroying the germs, to reduce the temperature, also to administer the sulphate of magnesia to wash out typhoid bacilli and other noxious matters which may find lodgment in the alimentary canal The author then detailed the symptoms of two cases and the method of treatment, and closed by saying that since Aug 1, 1890, with one exception, he had fed 182 patients of typhoid fever upon milk alone The exception was a case in which beef tea was administered by the nurse with a view to rendering invaluable assistance to the physician This patient died, but the other 181 patients recovered The patients were allowed to take their milk either hot or cold Other articles of diet were prescribed Rectal feeding was resorted to in many very weak patients The same article of diet, however, with the addition of a small amount of brandy was alone made use of Later in the disease, in some cases oils were rubbed into the skin at regular intervals and in sufficient quantities to aid very materially in upbuilding the system

Dr C C Hunt, of Dixon followed with a paper entitled "Antiseptics as Applied to General Practice"

TREATMENT AND CARE OF EPILEPTICS

This paper was contributed by Dr George Boody, of Kankakee The author says this class of unfortunates are shunned by friends and too often by their nearest relatives They feel that they are looked upon as outcasts by every one with whom they come in contact, and what wonder that they, unable to help themselves, at last become despondent and are driven to desperation, finding themselves within the walls of a hospital for the insane Of 100 cases in the hospital, investigation shows that the greater number of them became epileptics in childhood Of the cases that began in childhood, three-fourths of them were due to infantile convulsions, ascribed to teething Gray says that these convulsions are known to be due to defective development, which is itself brought about by defective nutrition and ought to be preventable Fright is ascribed as a cause, but the author has been unable to find statistics sufficient to prove how important a role it plays From a pathologic standpoint, epilepsy is divided into two great classes 1, epilepsy from organic disease, 2, from a morbid state or condition and not dependent upon any other disease The author then dwelt upon the symptomatology and diagnosis of the affection He is a strong advocate of the establishment of epileptic colonies and says that no State can boast of advancement in the treatment of the insane so long as it continues to permit the epileptic insane to be promiscuously scattered among the general insane There should be an absolute separation of these poor unfortunates from the other insane, and their speedy removal to a home for epileptics should be the foremost thought in the minds of all those who are deeply interested in the welfare of the insane Illinois ought to profit by the example set by Massachusetts, Ohio and New York each of which now have separate homes for this most unfortunate class of individuals

Dr Hugh T Patrick, of Chicago, read a paper entitled

THE COMBINATION OF HYSTERIA AND ORGANIC DISEASE

The author first related a number of cases in which hysteria was combined with various organic diseases These diseases include typhoid and scarlet fevers, rheumatism, puerperal fever and acute pelvic inflammation, as well as more chronic affections of various kinds Instances were also given in which there was a combination of organic disease and hysteria as well as simulation on the part of the patient It was particularly emphasized that organic disease of the nervous system was apt to be complicated with hysteria and illustrative cases were quoted The fact was emphasized that, particularly, multiple sclerosis and syringomyelia are apt to be complicated with hysteria, and among the toxemias those of lead and alcohol show most frequently the aforesaid complication He believes our semeiology to be sufficiently advanced, even in the obscure realm of the nervous system, to allow us to say that the different types formed by certain pathologic conditions and stamped by well-defined combinations of symptoms remain sufficiently distinct to be generally separated the one from the other When two types occur in the same individual it is not really a mixture with which we have to do, but simply a contiguity and juxtaposition, consequently in a given case of organic disease the diagnosis of hysteria is aided simply by means of the so called hysterical stigmata and other symptoms characteristic of this disease The various stigmata were then briefly enumerated Of these, the principal are the characteristic anesthesiæ in patches and the so called glove, stocking or sleeve anesthesia being the most typical A distinctive trait of most of these anesthesiæ is the fact that they do not interfere with cutaneous reflexes and automatic accomplishments The hysterical eye affections were then alluded to embracing the characteristic alterations in the visual field, monocular diplopia and polyopia, monocular amaurosis with binocular vision, anesthesia of the eyelids and conjunctivæ The peculiarities of hysterical paralysis were then pointed out as distinguished from those of organic origin as well as the characteristic differences between hysterical, organic and epileptic convulsions

In conclusion, the author insisted that a severe hysterical affection might occur in an individual who had never shown any other hysterical symptoms, that such an affection might remain unchanged for years and be almost the sole sign of this omnivagant disease Furthermore, that fever, a rapid or subnormal pulse, retention or incontinence of urine, loss of sexual power or desire loss of pupillary reflex to light, and ankle clonus, although indicating as a rule organic disease may occur as symptoms of hysteria

Dr S K. Crawford, of Chicago, read a paper entitled

HEMIPLEGIA BY THE HEMIPLEGIC HIMSELF

The author of this contribution was seized with left hemiplegia Aug 22, 1892 There were serious and, to him, most sensible perturbations of the circulation in the base of the right hemisphere of the brain, prominently located in his mind by the sensations present "The first sensations were those of intoxication, with a mentality like the country peddler's wagon, when a wrecked hind wheel is compensated for by a limber pole with the large end fixed upon the front axle and the wheelless spindle of the axle placed upon the swaying pole, while the topmost end brings up the rear" Dr Crawford said that he had treated six patients during the forenoon of the day of his seizure His motions were awkward in the extreme, but weakness or marked prostration did not supervene until the approach of the lunch hour, when it became a prominent symptom and he walked to his bed chamber adjoining his operating room, threw himself upon the bed to doze the afternoon away, half sleeping and half waking, with no pain or distressing sensations of any kind, and with hearing and sight acute and perceptions unimpaired The physical pain was nothing to be compared with the mental perturbations that were endured As regards treatment, under the direction of his physician and by and with the consent of his consultants, he sent a gentle and continuous stream of electricity through the right hemisphere of his brain from fore to aft, and ranging downward from the right frontal to the occiput of the same side, daily for ten months, with a sitting of fifteen minutes at each and every employment At each and every sitting the paralyzed muscles were awakened, as well as the dormant tissues, with massage, and a faradic or interrupted current This treatment was supplemented by the employment of digitalin, strychnia, and minimum doses of quinin, and continued for some months after the employment of the electric current was suspended Convinced that the treatment employed had been efficient, and when he could no longer detect any local pressure anywhere or observe any of that dazed or hazy condition about his being that so prominently prevailed in the earlier months of his illness, he began a course of specific nutritive treatment, by the exhibition of phosphorus in the way of medicaments and diet, and he was not only pleased but delighted with the results obtained

The Address of Section One was delivered by Dr Robert Leudeking, of St Louis, Mo, who selected for his subject

THE PRESENT STATUS OF SERUM THERAPY

A variety of theories exist in explanation of antitoxin production The one theory advances that the antitoxin is the product of the reaction of the specific toxin on the albumin of the living body It is a cell elaboration, the toxins acting as cell stimulants A second view says, May not the toxins become converted into antitoxins? A third view is, that in infections, where bacteria invariably have place, these themselves in their disintegration indirectly yield antitoxins As a consequence of these developments of scientific research, Behring shows us that the incorporation of such serum, possessed of these faculties, into a second animal, is followed by the development of a similar protective state This was called passively acquired or indirect immunization The next step in natural order is the application of these experiences by Behring and Roux to the treatment of disease, first in animals, then in man Behring held and still holds that antitoxin destroys the toxin, neutralizes its effect One writer has shown, however, that such is not the case Toxin and antoxin exist side by side A mixture of the two, for instance, that will on injection leave white mice unscathed, may kill a guinea pig, which is a more susceptible animal

Dr Leudeking believes that we have but two diseases that may to-day be discussed as amenable to serum therapy, namely, tetanus and diphtheria With reference to the former the literature contains a number of reports of cures Krieger cites five cases of recovery, but we have the word of Behring and of Roux to the effect that, although it is easily obtained and exhibits its preventive action with marvelous force, in practice it has not justified expectations Of 553 cases of diphtheria, 303 were injected with serum and developed a mortality of 13 2 per cent Two hundred and thirty were not so treated, causing a mortality of 47.8 per cent

ETIOLOGY OF SOME HYSTERICAL MANIFESTATIONS, WITH REPORT OF A CASE TREATED BY HYPNOTISM

This paper was read by Dr Hugh T Patrick, of Chicago A point made by the author in the etiology of hysterical manifestations was that they are frequently the result of a subconscious imperative conception which slowly or rapidly develops from sensory or psychic impressions The case was a unique one combining hysterical amaurosis of both eyes with hysterical pseudo-meningitis The symptoms developed rapidly following an ophthalmic migraine, the pain and scintillating scotoma being the etiologic factors This connection of cause and effect was distinctly shown during the recovery of the patient, and particularly by means of hypnotism The hypnotism in this case, besides throwing light upon the processes involved in the generation of the symptoms, was a valuable diagnostic and therapeutic aid. Regarding hypnotism, Dr Patrick insisted that there is no such thing as the hypnotic power as ordinarily understood but that in every case the subject in reality hypnotizes himself, that is, that hypnosis is always a subjective phenomenon The ordinary *modus operandi* of inducing hypnosis was described and illustrated

(*To be continued*)

Connecticut State Medical Society

The one hundred and third annual meeting of the Connecticut Medical Society was held at Hartford, Conn, in Jewell Hall The Fellows of the Society met at 2 o'clock There are five Fellows from each county of the State with the exception of Tolland County, which has only three representatives The meeting was presided over by President Francis N Braman, of New London The address of the President reviewed the efforts of the medical profession in 1763 to obtain from the Colonial Assembly an act regulating the practice of medicine This and subsequent efforts failed, until the Legislature of 1893 passed the medical practice act, under which the State is now experimentally progressing The act had brought about a more popular interest in medical practice, and the wisdom of the Legislature in passing the act was apparent The President recommended that the office of county reporter be abolished and that a member from each county be appointed to act as a general committee to do the work now assigned to the reporter, the members to be Fellows of the society The address was referred to a committee of three and its recommendations were indorsed and laid upon the table for action next year, as they involve an amendment of the by-laws

The Committee on Nomination of Essayists reported On Medicine, Max Mailhouse of New Haven, Chas B Graves of New London, *on Surgery, W H Carmalt of New Haven,* Harmon G Howe of Hartford, and they were appointed Honorary *members proposed, to be voted upon at the next* annual meeting, were T M Prudden of New York, W W Keen of Philadelphia, and T G Thomas of New York

The Committee on Medical Examinations reported an amendment to the present law, requiring three sessions for examinations to be held each year, in March, July and November, instead of monthly, as now The report was referred to the committee on legislation

The Committee on Nominations reported the following list, which was adopted President, Seth Hill of Stepney, Vice-President, Rienzi Robinson of Danielsonville, Assistant Secretary, Julian La Pierre of Norwich, Treasurer, W W Knight of Hartford Committee on matters of interest to the profession in the State C S Rodman of Waterbury, A E Abrams of Hartford, R W Kimball of Norwich Committee on publication, W H Donaldson of Fairfield Committee on anniversary, C P Lindsley, M C O'Connor and F H Wheeler of New Haven Dissertator, S B Childs of Hartford, alternate dissertator, Arthur N Alling of New Haven *Delegates to the* American Medical Association A E Abrams of Hartford, F H Wiggin of Litchfield, Nathaniel Hibbard of Danielsonville, H E Smith of New Haven, L B Almy of Norwich, John E Loveland of Middletown, G A Shelton of Shelton, Frederick Gilnack of Rockville, Robert Lawler of Bridgeport, Ralph A Goodpin of Thomaston, E P Douglas of Groton, E W Pierce of Meriden Maine Medical Society, P H Ingalls of Hartford, W W Hawkes of New Haven New Hampshire Medical Society, F W Simpson of Hartford, J B Kent of Putnam Vermont Medical Society, E F Davis of Ellington, Carl E Munger of Waterbury, George N Lawson of Middle Haddam Massachusetts Medical Society, D A Cleveland of Middletown, M Van B Dunham of Greenfield Hill Rhode Island Medical Society, T D Crothers of Hartford, F E Guild of Windham, E H Davis of Plainfield New Jersey Medical Society, H O Allen of Broad Brook, F W Wright of New Haven New York Medical Society, William H Carmalt of New Haven, J R Topping of Bridgeport, A E Abrams of Hartford Member of committee on medical examination, J F Calef of Middletown

The necrology during the year included the names of Drs H S Wildman, N J Hanmer and George C Gay of Waterbury, W A M Wainwright of Hartford, and Stephen G Risley of Rockville The honorary members who died during the past year were Dr Oliver Wendell Holmes of Boston, and Dr George Chandler of Worcester, Mass

In the evening, Dr James Campbell, President of the Hartford Board of Health, gave a reception to the members of the society at his residence, 34 Congress Street

The exercises the second day were as follows

Annual report of the Secretary, N E Wordin, Bridgeport, reception of delegates from other State societies

Vermont State Medical Society—J M Clarke, Burlington, Lyman Rogers, Bennington

Massachusetts Medical Society—T F Breck, Springfield, Albert Wood, Worcester

Medical Society of New Jersey—J A Exton, Arlington

Medical Society of New York—L Duncan Bulkley, New York, Reynold Webb Wilcox, New York

Reports from delegates to other societies

To the American Medical Association, San Francisco, 1894, Gould A Shelton, Joseph E Root, Edwin B Lyon

Baltimore, 1895, Alvin E Abrams, Chas S Rodman, Max Mailhouse, Geo R Shepherd, Fred'k Schavoir, Loren T Day, Frederick M Wilson

To the Maine State Medical Association, T Morton Hills, Thomas M Bull, M V B Dunham

To the New Hampshire Medical Association, Theodore R Parker, Leonard B Almy

To the Vermont State Medical Society, George C Bailey, O J D Hughes

To the Massachusetts Medical Society, D A Cleaveland, J J Morrissey

To the Rhode Island State Medical Society, Charles E Brayton, Henry B Plunkett

To the New York State Medical Association, Edward H Welch, Frederick S Smith

To the Medical Society of New Jersey, Max Mailhouse, Frederick B Baker, William V Wilson

Report of committee on matters of public interest in the State

Typhoid Fever—Irving W Lyon, Hartford, Perforation in Enteric Fever—its Surgical Treatment, Frederick H Wiggin, Litchfield, Notes of an Epidemic of Typhoid Fever at South Glastonbury, Charles G Rankin, The Treatment of Typhoid Fever at the Hartford Hospital, Joseph B Hall, Hartford A Brief History of Serum therapy, Arthur J Wolff, Hartford

The Use of Diphtheria Antitoxin in Connecticut—Irving W Lyon, Hartford, Report of the Progress of Medicine, Elbridge W Pierce, Meriden, Everett J McKnight, Hartford, Report on the Progress of Surgery, Chas C Godfrey, Bridgeport, L W Bacon, Jr., New Haven, Dissertation, Senile Cataract, one hundred cases Comment, Frederick M Wilson, Bridgeport

At 12 M the President's Address, Medical Sociology

The afternoon session began at 1 30 P M The first paper was on Pneumonia and the Treatment of its First Stage by Stimulation, by William J Tracy, Norwalk, followed by Tetanus, Edwin B Lyon New Britain, The Modern Management of Natural Labor Henry Fleischner, New Haven, Benjamin A Cheney, New Haven, Endometritis, its Surgical Treatment, Frederick Schavoir, Stamford, The Eye and Diseases to which Eye Symptoms Point, Arthur N Alling, New Haven, The Errors of Refraction found in Four Thousand Eyes, Harry S Miles, Bridgeport, Cerebral Thrombosis, Gustavus Eliot, New Haven, The Morphin Habit, John W Wright, Bridgeport, Simple Meningitis, Max Mailhouse, New Haven, Cerebro Spinal Meningitis, N Nickerson, Meriden, Tubercular Meningitis Stephen J Maher, New Haven, A Case of Acute General Miliary Tuberculosis, of so called Typhoid Form Autopsy, James M Keniston, Middletown, Modern Improvements in the Treatment of Diseases of the Skin, R A McDowell, New Haven, The Localization of Intestinal Obstruction, Illustrated by Three Cases, W S MacLaren, Litchfield, Observations on Operations for radical cure of Hernia, with report of cases, George C Jarvis, Hartford, Observations on Appendicitis with report of Operations Charles E Taft, Hartford, The Diagnosis and non operative Treatment of Appendicitis, John F Dowling, Enfield, Fracture of the Kneepan, James K. Mason, Suffield, Public Hygiene, Lucy C Peckham, New Haven, Defense of Public Health Boards, Frank W Wright, New Haven, The Therapeutic Value of Mountain Forests, Charles D Alton, Hartford, The Inebriety of Insanity from a Medico-Legal Point of View, Thomas D Crothers, Hartford, A Case of Utero-vesico-vaginal Fistula, with successful Operation, George C Jarvis, Hartford

The annual dinner was served at the Hartford Hotel in the evening

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This is obtainable, at any time by a member of any State or local Medical Society which is entitled to send delegates to the Association All that is necessary is for the applicant to write to the Treasurer of the Association Dr Henry P Newman Venetian Building Chicago, Ill , sending him a certificate or statement that the applicant is in good standing in his own Society, signed by the President and Secretary of said Society Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership

On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly

Gentlemen already members of the Association should send their annual subscription to the Treasurer or direct to the JOURNAL office

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor* and all communications relative to the business of the JOURNAL, proof sheets returned or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 86 Fifth Avenue, Chicago

SATURDAY JUNE 1 1895

TO THE YOUNG DOCTORS OF 1895

"Practice and experience are of the greatest moment in arts and there is no kind of occupation in which men may not learn by their abortive attempts ' —COLUMELLA

The schools have turned out this year an unusually large number of physicians Where they will all go? what will they all do? and how many will succeed in reaching a high professional level? are questions that can only be answered by speculation The medical statistician assures us, with the blunt rudeness of a mathematical slugger, that such a percentage die during the first year, that so many grow weary, and engage in other pursuits within a twelvemonth, or within two years at most, and the remainder, say 75 per cent remain in the profession to work, and worry, and win success or failure as best they may

To this last class we wish to indite a few words, although at a venture we presume they must have had a vast deal of advice in the semestre just closed

We urge the young doctor to lose no time in joining the local medical society where he casts his lot The men composing it may not be exactly to his mind, they may to outward view lack even some of the refinements of society, they may not care for them, they may have fallen distinctly below the level of the average knowledge of the times But we advise the young doctor to pay attention and watch these wise old practitioners, for experience is a wonderful teacher, and many times he may learn very much from those he now thinks so far behind in pathology and laboratory lore

Sometimes you may feel hurt at being treated like a raw recruit by these veterans, but you must remember that like all veterans they will be with you when you win your spurs, in society debate, or at the bedside, and in proportion as you demonstrate your ability, their doubt of you will disappear One thought will, we think, serve to give you a little closer relation with the old fellows, and that is that each one says to himself when he meets you, at the society or elsewhere "Ah, if I were only young again like that young man! With the knowledge of the world, of men, of material things, that I have acquired, and his modern laboratory technique, what could I not accomplish in the average life time that is before him "

Be guided, then, by the voice of experience in all things not controverted by recent facts, and try yourself to become that ideal being the old doctor would be, had he only your growth and recent knowledge to add to his tact and *savoir faire* Watch him closely! he knows men as open books, he knows how to manage and control them, he knows when to smile and when to be grave He has learned his community, he knows what he can do without offense, and how best to acquire its good will He knows best how to set forth the knowledge he has to its best advantage Take all you can of his method, it is the result of experience, and pay him that deference when you meet him, that you yourself would like to receive from the classman of 1945 freshly filled with the new doctrines of which you will have only heard through your journal

EURIPIDES lamented, "Alas! why is it not permitted to mortals twice to be young, and thence return once more to old age? For in our domestic affairs if aught be ill conducted, we put it right by after thought, but we have not this power over life If we could be twice young, twice old, when we made a mistake, having twofold life, we could correct it "

The story of the Wandering Jew as retold by WALLACE in the "Prince of India," shows how much superior to every other man was that mysterious one who renewed his youth every one hundred years, and with it retained all the knowledge he had acquired during each centennium, and this leads us to advise our young doctor of 1895 to cultivate and conciliate his older colleagues, so that he himself may convey their general stock of information, in continuity with his own, to the profession of the future

THE DUAL BRAIN

The theory of duality of the brain as maintained by HOLLAND and WIGAN, and later by BROWN-SEQUARD and others, is one in regard to which most physicians probably hold themselves uncommitted, as they are hardly ready to admit it as proved that the two hemispheres can act to any considerable extent independently of each other Clinical observations such as would be of value in determining whether such independent action is possible are rare, and those that seem to point that way have generally been more or less incomplete and unsatisfactory A recent observation by Dr L C Bruce (*Brain*, spring, 1895), is therefore of special interest, as it comes from one who may be presumed to be a competent observer, and it is published in one of the highest grade medical periodicals of our time

The patient was under observation continuously for three months up to the time of the report In one stage he was demented, left-handed and talked only Welsh and gibberish; in the other he was fairly intelligent, but maniacally mischievous, right-handed and talked English, but understood and could converse also in Welsh In an intermediate condition he was ambidextrous, and spoke a mixture of Welsh and English In the English stage he remembered nothing of the Welsh stage, but had a perfect recollection of anything that had occurred in his previous English stages His circulation and his bodily conditions generally were good in this phase, while in his demented state his mental and physical conditions were exactly the reverse In his maniacal condition he wrote legibly with his right hand and produced mirror writing with his left, the specimens obtained with difficulty during the demented condition were illegible but were written with the left hand, from left to right Thinking that the transition from one stage to another might be due to circulatory changes, Dr Bruce took sphygmographic tracings in both conditions in the maniacal or English stage the tracing revealed a full pulse of high tension, while in the other it had lower tension and less volume Attempts were made to produce the two different stages artificially, but without success

We have apparently in this observation, as Dr Bruce remarks, a case of right hemispheric melancholia or dementia and of left hemispheric mania, occurring probably in an individual whose cerebral hemispheres acted more or less independently prior to the advent of the mental disorder or disorders, if we can assume the existence of such a condition Or, as he suggests, only one lobe of the cerebrum, the left, is educated, and takes the greater part in mental action, the right functioning mainly in motion, sensation, etc, and playing but a very small part in intellection, would naturally show its derangement rather by the symptoms of dementia than those of mental exaltation

It seems possible, moreover, that this condition of independent action of the hemispheres may be only exceptional, and that ordinarily, either originally or through education they always act together and share the same functions It will be noted that in this case, though Dr Bruce does not remark it, speech, which is generally regarded as a function of the speech center in the left hemisphere, was not altogether lost in this patient but was limited to Welsh, his native tongue This, as far as it goes, would indicate that the left brain was not altogether inactive or that there were bilateral speech centers, the former being perhaps the most probable of the two alternatives

The case is an interesting one, not only as regards its bearing on the question of the duality of the brain, but also as suggesting possibilities from the study of the cases of circular insanity in our asylums generally It may be that a closer observation of such patients would reveal other more or less similar instances, in which a marked predominance of one or the other cerebral hemisphere might be seen in the different phases of the disorder In such a way, it may be, alienists have a special field of physiologic and psychologic research that has been heretofore too little cultivated

COURT-MARTIAL OF A NAVAL MEDICAL OFFICER

The case of Medical Inspector Kershner, Fleet Surgeon of the North Atlantic Squadron, has lately attracted considerable attention While in harbor at Kingston, Jamaica, a sick call was sent from a foreign merchant vessel to the *New York*, the flagship of the squadron Dr Kershner declined to attend the case on the ground that it might be one of yellow fever, and that his first duty was to protect the men of the fleet from infection The captain of the *New York* reported the refusal to the Admiral, who thereupon sent an account of the matter to the Navy Department It is understood that the Surgeon-General sustained Dr Kershner in his action and that the Secretary of the Navy could find nothing in the Naval Regulations requiring medical officers to attend the sick of merchantmen in places where other medical attendance was available Meanwhile a Court of Inquiry was convened on the *New York* to investigate the manner in which certain indorsements in the case got into the newspapers, and since then Dr Kershner has been tried by a court-martial at Brooklyn Navy Yard for violating Article 235, Naval Regulations, in giving to the press the said proceedings and for perjury in testifying under oath that he had not done so It appears from the evidence given before the court-martial that the Doctor has been much disturbed by reflections on his professional and private character, to-wit, that he was lacking in humanity, timorous, etc, made by the Admiral on certain correspondence sent to the Navy Department concerning the affair, and that he had written to Surgeon-General Tryon and to Medical Director Bloodgood asking for their advice under the conditions then affecting him His counsel held that there could be no offense in thus consulting his superior in the Medical Department as it was customary for medical officers when in difficulties to write such letters to their friends in the Service and particularly to the Surgeon-General In denying before the Court of Inquiry that he had furnished an official account of the matter to any one but the

Surgeon General he has not regarded his letter to Dr Bloodgood as coming within the scope of the query, which had a reference to copies furnished with a view to publication The official report of the proceedings of the court martial are now before the Department, but the finding at this writing has not been made known

In the Journal of March 16, we indicated the need of a re organization of the Navy Medical Department, to give energy to its present membership and enable it to fill its vacancies We dwelt mainly on the objectionable features of the Service as presented to young officers, but it will be seen from Dr Kershner's case that objectionable features are not absent from the service of officers even when they attain the higher grades The publicity given to this matter in the daily press will not tend to induce young men to enter the Naval Medical Service There are now twelve vacancies in the Corps, and perhaps it would be a good thing for the Corps if it were found that these vacancies could not be filled The medical officers of the Navy should in all respects be on the same footing and have the same consideration as their confrères in the Army

THE SUCCULENT STRAWBERRY

The season of the strawberry is now upon us This berry in America is our earliest and latest fruit, for it is now produced in gardens on the Atlantic coast all the way from Florida to New Brunswick, in abundance in mid season the entire length of the Mississippi Valley, and in great profusion on the Pacific coast

One of the Journal's young men last week in an excellent article on the social status of physicians, credited the well known phrase about the strawberry to Sidney Smith, which was too generous to Smith, for it was a physician Dr Wm Butler (d 1621) who first said that "doubtless God could have made a better berry, but doubtless God never did " Bartlett says this first appeared in the second edition of Walton's "Angler," 1655, and further quotes Roger Williams in his "Key into the Language of America," 1643, p 98, as saying "One of the chiefest doctors of England was wont to say, that God could have made, but God never did make, a better berry "

In Shakespeare's time the strawberry was held in high esteem Richard III says to Ely "My lord of Ely, when I was last in Holborn, I saw good strawberries in your garden there, I do beseech you send for some of them " But the strawberry was an ill favored token for Desdemona, for the handkerchief which Iago gave Othello to whet his jealousy had strawberry spots

Sir John Sinclair says [1] "In regard to strawberries it is impossible to say too much in favor of that fragrant cooling and wholesome article There are various modes of eating them, but with milk and cream is generally accounted the most agreeable, and is found to lessen in the stomach, the activity of the acid they contain Strawberries are very wholesome They tend to promote all the evacuations, and are laxative without inducing any apparently weakening efforts, they are also supposed to possess qualities unfavorable to stony concretions The wild strawberry has the most agreeable flavor, and is perhaps the best of the whole species "

Beddoe's "Hygeia," vol ii, essay viii, p 61 says "To persons with weak digestion, the addition of a meal from the garden, to one from the kitchen is in the highest degree pernicious " From this it appears that as there are two sides to almost every story, so here a little investigation shows that not everybody may eat raw strawberries with impunity

That interesting volume, *Le Cuisinier et le Médecin*, Paris, 1855, says "Horticulture has marvellously developed the size of this fruit, without damage to the exquisite delicacy of its taste The fruit is refreshing and a little laxative, it is not well received by all stomachs, because it is hard and cold Convalescents should abstain from it, and those with disease of the stomach The berries are eaten ordinarily raw, with sugar, with red wine, Madeira or Frontignan, etc They may be also eaten with cream, but then they are very indigestible "

Fazio (*Trattato d' igiene, Napoli*, 1887, p 763) gives an analysis of the strawberry from Konig

Water	87 66
Sugar	6 28
Cellulose (from seeds)	2 32
Nitrogenous substances	1 07
Free acid	93
Non nitrog substance	48
Ash and remainder	81

An interesting case of alleged poisoning by strawberries will be found in the *American Journal Medical Sciences*, N S, 1851, vol xx, p 363

The cooking of the berry makes it one of the most digestible of all table fruits, and while by no means do we object to the delicate flavor of the fruit as it is picked, yet the difficulty must be admitted of having the fruit placed on the table raw, and yet of exactly that degree of ripeness that allows its highest degree of digestibility As the berry is generally sold in the market, there is such a wide variation between the greenest and the ripest, that only proper cooking can make a uniformly pleasant and digestible dish

THE OHIO STATE MEDICAL SOCIETY

The semi centennial meeting in Columbus, May 15-17, was an indication of decided progress in the affairs and influence of the society Nearly five hundred physicians attended, most of them members One hundred new members were admitted, making the total permanent membership about eight hundred and twenty-five

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[1] The Code of Health and Longevity etc etc Edinburgh 1807 Vol I, p 299

The program contained a lecture by Judson Daland on malaria, illustrated by lantern slides The Doctor was elected an honorary member of the society Two alleged leprosy cases were exhibited by Dr J G McDougal These cases are quite distinctly an Ohio production, adding to the interest in them We shall print this paper with the photographs in an early number of the Journal

Other notable features of the sessions were an elaborate presentation of the status of the treatment of diphtheria from different parts of the State by Drs Howard and Ohlmacher, of Cleveland, Case, of Ashtabula, Moore, of Columbus, Eichberg, of Cincinnati An able paper was presented on hot-water bath treatment of lobar pneumonia, by Dr Jos Eichberg, of Cincinnati, and one on typhoid fever by J E Woodbridge, of Youngstown

One of the most important features was the organization of a committee on medical legislation based on county representation, and the appropriation of $500 to begin their work

Ethical questions were decided, placing the society unequivocally in the list of staunch supporters of the Code of the American Medical Association

Dr Dan Millikin, of Hamilton, was elected President, Drs J H Goss, of Lancaster, W H Humiston, of Cleveland, Jno A Murphy, of Cincinnati, B M Ricketts, of Cincinnati, Vice-Presidents Dr Thos Hubbard, of Toledo, Secretary, Dr H M W Moore, of Columbus, Assistant Secretary, Dr Jas A Duncan, of Toledo, Treasurer

The next meeting will be held in Columbus, May 27, 28, 29, 1896

A BACTERIOLOGIC CONVENTION

The Journal of April 27 gave notice of the organization of a cooperative bacteriologic investigation by the committee on water supplies of the American Public Health Association, and of the difficulties encountered by the committee in drawing up a scheme of laboratory methods for use in the investigation

We now invite the attention of boards of health, State and municipal, to the call of the committee for a convention in the Academy of Medicine, New York City, on June 21 next We trust that the laboratories of each board will be represented at the meeting, to aid in making its results give accurate expression to the experience of American bacteriologists on the points at issue Collegiate institutions also are interested, as the subjects to be discussed by the convention are those of pure or scientific bacteriology irrespective of the practical work hereafter to be undertaken by the members of the committee

The names of the bacteriologists who are to open the discussion of the various points, give assurance of the most advanced thought in each direction We print the call of the committee in another column

TO THE NEW MEMBERS

The Editor is in receipt of several letters inquiring why the new members do not receive the Journal We have to say that we have been unable, up to this time, to obtain a list of new members from either the Permanent Secretary or the Treasurer The gentlemen who joined the Association at the last meeting will have to wait until the Treasurer's office furnishes the list In the meantime we have *estimated* the number of new members at 300 and are storing up that number of extra copies

SOCIETY NEWS

Call for a Bacteriologic Convention —The following, dated May 21, 1895, has been issued by the Committee on Water Supply of the American Public Health Association

Sir —Your presence is earnestly solicited at a Convention of Bacteriologists to be held upon Friday and Saturday, June 21 and 22, 1895, in the Academy of Medicine, New York City

The Committee of the American Public Health Association appointed to determine the possibility of establishing co operative investigation into the bacteriology of American waters was from the outset impressed strongly by the fact that the chaos at present existing with regard to the bacteriology of water is essentially due to want of exactitude in the details of research and more especially to the absence of standard and generally accepted methods The replies received to letters circulated by the committee and addressed to the leading laboratories of the United States and of Canada, have indicated a general concurrence in the views therein expressed and have shown how strong is the consensus of the opinion that the time has come to attempt to establish the methods of systematic bacteriology upon a basis more nearly resembling that of an exact science The proposal that a conference be held has met with a most willing response on the part not only of those representing State, provincial and municipal boards of health, and connected with the water supplies of large public bodies, but also of those interested in every branch of bacteriology The fact is fully appreciated that it is in the highest degree desirable that the methods employed by any one worker in any branch of systematic bacteriology should be such as others can be expected also to repeat with precision and should be such as gain the approval of the majority A satisfactory settlement of the questions given below is conceded by experienced bacteriologists to be necessary for substantial progress in the future, not only in the field of pure bacteriology, but also along those lines in which its application plays a prominent part—in the bacteriology of water, air, soil, milk, etc, and in that of disease The conference will therefore be an attempt to establish some common ground-plan for systematic work in bacteriology in general, in the bacteriology of American waters in particular

The committee is authorized to announce at this date that discussion on the points at issue will be opened as follows

1 *What method* shall be followed in neutralizing all media, and what standard degrees of reaction shall be adopted?

The discussion upon this and upon questions 3 and 8 will be opened by G W Fuller, S B, Biologist in charge of the Lawrence Experimental Station of the State Board of Health Massachusetts, who will communicate the results obtained by the committee upon these points

2 What effects upon species differentiation, are produced by the ordinary differences in composition of peptone meat juice gelatine, etc W T Sedgwick, Ph D, Biologist to the State Board of Health, Massachusetts

3 What media shall be used for all species differentiation, and how shall they be uniformly prepared?

4 What shall be the medium for and the conditions of, the stock culture from which all media are seeded? E O Jordan, Ph D, University of Chicago

5 What shall be the systematic detailed method to be followed in observing the results of cultures and the manner of recording them? W T Sedgwick, Ph D

6 What method shall be adopted by which full benefit may be derived from morphologic characteristics? Dr T M

Cheesman, Laboratory of College of Physicians and Surgeons New York

7 What tests shall be used for separating bacteria into clearly marked groups? Wyatt G Johnston, M D Bacteriologist to the Board of Health of the Province of Quebec

8 What shall be the method followed in determining the relation of bacteria to temperature? Geo M Sternberg, Surgeon-General, U S A

9 What special methods are of value in the isolation of pathogenic bacteria in water? A C Abbott M D, University Laboratory of Hygiene Philadelphia, Pa , E O Jordan, Ph D University of Chicago

10 What shall be the method of procedure in determining the pathogenesis of bacteria found in water? W H Welch, M D, Johns Hopkins University, and Victor C Vaughan, M D University of Michigan, Ann Arbor

11 How is variability of species to be regarded? J G Adami M D, McGill University, Montreal

12 What new methods can be suggested for the separation of bacteria into groups and for the identification of species? J J MacKenzie, Bacteriologist to the Board of Health of the Province of Ontario

Communications in connection with these subjects have also been promised by several others, including Thos B Carpenter, M D, Health Department, Buffalo, N Y , H C Ernest Harvard Medical School, C J Foote, Yale University, H L Russell, Agricultural Experiment Station University of Wisconsin, C Smart, Major and Surgeon, U S Army, E B Shuttleworth, University of Trinity College, Toronto

The full program giving detailed order of proceedings will be issued early in June The replies already received by the committee have assured us that the bacteriologic departments of many State, provincial and municipal boards of health will be represented at the conference, as also the principal universities of the United States and Canada The conference will thus be a peculiarly representative assembly of bacteriologists The importance of the subjects to be discussed leads us to hope that you will be present or be represented by a delegate The convention will be called to order at 10 A M , on Friday, June 21

Yours faithfully,

Charles Smart,
J George Adami,
George W Fuller,
Wyatt G Johnston

NECROLOGY

Carl Thiersch, M D , the eminent German surgeon, died on the 28th ult at Leipzig, aged 73 years He was a native of Bavaria and was educated at the University of Munich, graduating in 1846 He afterward resided successively in Berlin, Vienna and Paris He was a frequent contributor to the literature of his profession, and the system of skin-grafting which he introduced is now generally adopted by surgeons throughout the world He also wrote upon maxillary necrosis from phosphorus and upon Listerian methods in surgery

George A. Perkins, M D , who died in Salem, Mass, on May 18, was a man of mark and of varied experience He was born in Salem, Oct 15, 1818, and received his early education in the local schools When he was 20 years old he engaged as a wood-engraver with a New York publishing house and so continued until 1836 After his return from Africa, whither he went as an Episcopalian missionary, he entered Harvard University Medical Department He took his degree there in 1844, and soon afterward returned to Fishtown, in West Africa, to serve as a medical missionary In 1850 he returned to his native town and at the age of 37 began life anew in the pursuit of private practice, and not long after began with others to agitate for the formation of the Salem Hospital That institution, of which Dr Perkins was consulting physician at a recent date, was launched in 1874 He was Post Surgeon at Forts Lee and Pickering from December 1863, to May, 1865, and for a long time physician at the Salem House of Correction and the almshouse He was widely known as an expert microscopist and chemist He was a member of the Salem School Committee for fifteen years, and of the Essex Institute, Massachusetts Medical Society, New England Historical and Genealogical Society, Starr King Lodge of Free Masons, Salem Athenæum, and the Tabernacle Church He was a member of the original staff of the Salem Hospital

Henry Joseph Hesse, M D , formerly a coroner of Kings County, N Y , died May 10 at his home in Brooklyn in the forty second year of his age He was born in New York of German parents and in 1876 received his degree in medicine from the Long Island College Hospital He began practice at once in the eastern district of the city of Brooklyn, where he continued during his professional life The cause of his death was erysipelas, an attack of two weeks' duration followed about a week before death by a pneumonia

Richard Dubois Traver, M D , of Troy, N Y , died suddenly May 17, from a poisonous dose of chloral It is stated that he mistook the latter drug for Epsom salts, and immediately upon swallowing the solution he recognized that he had made a mistake He busied himself for some time in his own office consulting his books for an antidote for the poison He thus lost valuable time, and when it was too late went to the office of a neighboring physician He there secured help, but it was unavailing, for death ensued not long afterward He was an alumnus of the St Louis Medical College in 1864, and of Bellevue College in 1867 He was eminent in his county organizations, having been president of his medical society He was a member of his State Association and a veteran of the Rebellion, and also served in the 8th United States heavy artillery and the 7th Minnesota Infantry He was also a prominent Mason The Doctor was 56 years of age and had resided in Troy about twenty years

Prof Gustav Hirschfeld, of the University of Königsberg, died in Wiesbaden on April 20, after a long and heroic fight with cancer In the vain hope of obtaining relief he even came to America, and became an inmate of the New York Cancer Hospital for a time In his great and minute knowledge of Asia Minor and all matters pertaining thereto he was easily without a peer He was a Jew, gifted with keenness of intellect and charm of manner as are few men He died in the very prime of manhood —*The Independent*

W Mallet Prevost, M D A press dispatch announces the decease of the above named physician, late of Philadelphia, as having occurred May 13, at Fresnillo, Mexico

J F Simmons, M D , of Houston Texas, is reported by telegraph to have been fatally shot by Robert Owen It is stated that the physician was at the house of his assailant, having been summoned there to see a sick child The assailant also shot his wife, but not fatally , he then committed suicide

William M Thornton, M D , of Boston, Mass , May 23, aged 49 ——Robert L Mintie, M D , of Chicago, May 21, aged 45 ——Mary H Thompson, M D , of Chicago, May 21, aged 62 ——Ezra Pascal Allen, M D , of Athens, Pa , May 21, aged 74 ——W L Blickhan, M D , of St Louis, May 20, aged 33, superintendent of the St Louis City Hospital ——J D Carter, M D , of Knoxville, Tenn , May 19 ——Jay Guy Lewis, M D , of Sparta, Ore , May 12 ——S W Beck, M D , of Washington, Ind , May 16, aged 78 ——James H Fore, M D , of Baltimore, May 16 ——Chauncey R Fairchild, M D , of Kansas City, Mo , May 16, aged 77 ——David Youngman, M D , of Boston, Mass , May 11, aged 78 ——J J McManus, M D , of Rutland, Vt , May 15 ——G S Butler, M D , of Edgefield, S C , April 28 ——Fred Barrett, M D , of Duluth, May 17 —— J R Flowers M D , of Columbus, Ohio, aged 59

PUBLIC HEALTH

The Food of the Black Belt —The Department of Agriculture at Washington has established a department for research concerning the quality and quantity of food stuffs consumed by the colored population in the black belt of our Southern States It is located at the Tuskegee Institute, Tuskegee, Ala

Vigilance at Quarantine —The *Mexican Prince*, from Rio de Janeiro at New York quarantine May 25, was detained by Health Officer Doty to investigate the cause of death of a passenger during the voyage The death was presumably due to consumption, but as there is yellow fever at Rio, Dr Doty deemed it advisable to make careful inquiry

The Plague is Quarantinable —Under the last Regulations of the Treasury Department the diseases to be quarantined at ports of entry are cholera, yellow fever, typhus, variola, leprosy and the plague The latter disease is now again rampant at Amoy, China, with fifteen deaths from that cause daily, so that the Pacific coast will have to be on the *qui vive*

Making Vaccination Odious —If it be true, as reported, that two physicians of the New York City Board of Health recently vaccinated 1,000 children in nine hours, that is a fraction over 18 a minute, the following comment of the Bangor (Me) *Commercial* is just and timely "To say that vaccination could be properly performed at this reckless, breakneck rate is simply ridiculous But possibly these eminent practitioners wanted to give the impression that vaccination is a humbug and did their work with that end in view"

Janitors' Homes in Public Schools —A case of diphtheria having occurred in the family of the janitor of public school No 89, in a New York City up-town district, the school was closed and 2,000 pupils will take an unexpected vacation These cases nearly always beget a certain amount of friction between health officers and the Board of Education The short way out of it seems to be to have the janitors live near by rather than in the school edifice The loss to the pupils of their enforced exclusion from school privileges, to say nothing of the possibly greater dangers of infection among the little folk, is not easily calculable It is not infrequently through some species of favoritism that the janitor is crowded into a building—so that he can avoid rent-paying—which was never designed to have a family residence in the lower regions

Canned Horse —The suggestion in the Journal of April 13, concerning the utilization as a food supply of the immense droves of wild horses in Oregon, Washington, Idaho and Montana, has developed the fact that some of the salmon canners on the Pacific coast had already turned their attention in that direction One firm has put "canned horse" on the San Francisco market where it has been served in restaurants The local papers say the flesh resembles beef in appearance, and can not be told from it by taste "The grain of the flesh is fine, and dozens of people have sampled the canned horse, and are unanimous in pronouncing it good, though there was not one of them but confessed to a prejudice against the eating of horseflesh" Another firm has organized at Portland, Oregon, for canning on a large scale, it has bought 6,000 horses at from $1 to $5 apiece and is contracting for great numbers, expecting to supply a palatable, nutritious flesh-food at one quarter to one-half the price of beef It only remains for the learned lexicographers to put a name to it, "horseflesh" obviously will not answer, it is too suggestive

Another Typhoid Epidemic —Out of a population of about forty thousand inhabitants, Lancaster, Pa, had at the close of May not less than one hundred cases of typhoid fever und treatment, with an average of ten to twelve new cases r ported daily The water supply of the city is obtained fro the Conestoga creek, a large stream which courses through t county and which supplies the city reservoirs It is claime that the Conestoga is polluted from various sources, so th its waters are a highly favorable culture medium for a forms of pathogenic bacteria Reports say that the loc board of health is using energetic efforts to check the sprea of the disease and the State health authorities, who alo have power over the water courses, will take measures remove the cause of the epidemic Already there have bee several deaths, and some well-known citizens are prostrat by the disease

Persistence of Diphtheria Contagion —At a recent séance the Medical Society of the Paris Hospitals, MM Sevest and Méry communicated some extremely significant fac showing that the Löffler bacillus may persist in children w have been rapidly cured by the antidiphtheritic ser This brings up the question, how long is it necessary to late diphtheritic children after disappearance of the membrane and of the symptoms in general? They mentio a case in which virulent inoculable bacilli were found fort days after removing the tracheal tube Other observe have noticed a much longer duration, *e g*, Belfanti (*Reform Medica*) reports a case of contagion after an interval seven months A bacteriologic examination is the onl means of assuring us of the disappearance of the dange but while this is easy in hospitals, it is difficult in famil practice We must not insist on too prolonged isolation families with small means, where the children are numero and the dwelling small It seems that fifteen days' isol tion after complete disappearance of the false membrane when there are no more clinical symptoms, and esp cially when there is no more discharge from the nose, is su ficient In cases of prolonged virulence for thirty or fort days, while this lasts it is advisable to continue the isol tion as well as the irrigation of the mouth and nose [1]

Attacking Sanitary Merit —The usual biennial fight agai Dr Henry D Baker, the able and useful Secretary of t Michigan State Board of Health, is on in the General A sembly of that State, and a legislative inquiry into the met ods and value of the Board and of its Secretary was recent concluded The Journal is glad to note that the press the State, generally, take an intelligent view of the situ tion, the Detroit *Journal* of a recent date characterizing t present attack as instigated by the "personal animus of tw disgruntled ex-clerks," and asserting that, while the Boar conclusively refuted every important charge, "the invest gation has given most humiliating evidence of the ea with which small-minded men, smarting under fanci grievances, can pull the Legislature around by the nose D Baker declared that one clerk was insubordinate and t other lazy and incompetent Their attacks on him we relative to small things, which may be found in any publ office" In reviewing the work of the Board during the pa years, in "stamping out" the communicable diseases an in investigating their causes with the view of findin means of prevention, our lay contemporary says "Th credit for the usefulness of the State Board of Health w very cheerfully accorded to Dr Baker in a large measure b the present and former members of the Board who testifie before the committee He is a broad man and has more a ministrative ability than is usually seen in men of scienc He is not yet an old man, and Michigan can not afford t dispense with his services now" To which the Journ would add that neither can the country at large nor san tary interests generally afford to dispense with his service for very many years to come

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[1] L Union Medicale, May 2, 1895

First Meteorological Observations —Renou in his history of the thermometer claims the construction of the first mercurial thermometer for Fahrenheit 'The date," he says, 'so interesting for meteorologists, may be put at about 1721" The classic treatises state that this instrument dates from the sixteenth century, some claiming it for Galileo, others for Drebbel In a communication to the Paris Academy of Sciences, the Abbe Maze announces that in searching through the documents of the Paris Observatory he has discovered that a priest astronomer Ismael Bouillau, made a series of observations in Paris with a mercurial thermometer in 1659 (*Ad Thermometrum Observationes Anno 1658, Parisiis*), thus antedating Fahrenheit sixty two years Bouillaud's observations were taken in the Rue des Poitevins and comprise three summers and two winters They are earlier than those of Falure regarded hitherto as the oldest for Parisian climatology The first series of meteorological observations in the world were made at Florence in 1655, by Father Raineri [1]

The Death Rate of Paris.—The rate for Paris in 1894 was at the low figure of 20 per 1,000, a rate never before reached in that city The actual number of deaths was 5,000 less than in the year previous, which was one of the two most healthful years heretofore experienced In 1891 the second lowest rate was bad, namely, 21 65 per 1,000, while in 1893 it was 21,81 per 1,000 The deaths from the preventable diseases have decreased in a manner never before known in Paris, the decrease having formed an appreciable factor in the lowered total rate M Deschamps, in his report to the Municipal Council refers to the apparent causes of the improved health of the great city He says

"The improvement in the salubrity of Paris is a very long and complex undertaking, in which every detail has its value The principal items of this enterprise are general improvement of streets an adequate supply of spring water for domestic use the increase of general prosperity, improved inspection of food stuffs, progress in the education of the masses, hygienic houses and drains, and destruction as complete as possible of the germs of infectious and contagious complaints"

The following are the statistics of the last fifteen years for Paris

In	Deaths	Per Thousand
1880	55 706	25 77
1881	55 103	23.56
1882	[illegible]	25 33
1883	54 783	24.38
1884	55 050	24 42
1885	52 720	24.85
1886	55 110	24 35
1887	52 855	23 00
1888	51 230	22 00
1889	51 083	22 93
1890	54,566	22.80
1891	52 [illegible]	21 65
1892	51 636	22 47
1893	52 947	21.60
1894	48 145	20 00

There has been no essential alteration in the birth rate for the last four years

The Public Bath Act of New York State —By an enactment of the last Legislature of that State, it has been made mandatory upon all large cities to maintain free baths, to be open fourteen hours each day and to be supplied with both hot and cold water The essential features of the Act are given below, the act which this latter amends was permissive only "All cities of the first and second classes shall establish and maintain such number of free public baths as the local board of health may determine to be necessary Each bath shall be kept open not less than fourteen hours for each day, and both hot and cold water shall be provided The erection and maintenance of river or ocean baths shall not be deemed a compliance with the requirements of this section Any city village or town having less than fifty thousand inhabitants may establish and maintain free public baths, and any city village or town may loan its credit or may appropriate of its funds for the purpose of establishing such free public baths" The propaganda in favor of this compulsory law has been indefatigably led by Dr Simon Baruch of New York City It is certain that he and his associates will rest *neither day nor night* until the city fathers have given the poor several of these free baths The form of the baths will be that of the 'rain baths," which are in effect shower baths Each shower is in a small apartment, just sufficiently large to allow the bather to stand upright and to give him room to properly scrub himself When he enters his bath all he has to do is to pull a chain and receive a full supply of water over his form The shower will work automatically so that when he ceases to pull the chain the supply of water will be cut off, enabling him to cleanse himself in any way he may desire These baths are so compact that within a very small space a great many persons can be accommodated In the building erected by the Society for Improving the Condition of the Poor there is a bath area of only 26 by 69 feet Yet this institution accommodates 800 bathers a day This also is the capacity of the Baron de Hirsch Fund baths The Riverside Association baths accommodate 500 persons a day and the DeWitt Dispensary baths, which occupy very little room 50 bathers a day

Health Reports —Sanitary reports to the Supervising Surgeon General, Marine Hospital Service

SMALLPOX—UNITED STATES

Arizona Nogales, May 22 1 case
Michigan Battle Creek, May, 2 cases
Missouri St Louis May 11 to 18, 3 cases, 2 deaths
Ohio Cincinnati, May 17 to 24 7 cases
Pennsylvania Philadelphia, May 11 to 18, 14 cases
Wisconsin Milwaukee May 18 to 25, 5 cases

SMALLPOX—FOREIGN

Brazil Santos March 16 to 23, 3 cases, 1 death, April 17 to 20, 3 cases, 1 death
Ceylon Colombo, April 13 to 20, 1 case, 1 death
England Liverpool, May 4 to 11 2 cases, London, May 4 to 11, 33 cases
France Rheims May 4 to 11, 1 case
Holland Rotterdam, May 4 to 11, 2 cases
India Calcutta, March 31 to April 20, 444 deaths
Ireland Dublin May 4 to 11, 15 cases, 1 death
Italy Naples, April 21 to May 4 1 case, 1 death
Porto Rico San Juan April 17 to May 8, 28 cases
Russia Batoum April 1 to 30, 7 cases, 8 deaths, Odessa, April 27 to May 4, 9 cases, 1 death, Warsaw, April 27 to May 4, 1 death
Scotland Edinburgh, May 4 to 11, 1 case, 1 death, Glasgow, May 4 to 11 70 cases, 1 death
Switzerland Zurich April 27 to May 4, 1 death

CHOLERA—FOREIGN

Arabia Camavan, March 23 to April 9, 20 cases 25 deaths, March 30 to April 21, 60 cases, 15 deaths, Djeddah, May 1, 28 deaths, Mecca, April 21 7 cases, April 22, 10 deaths
France Roubaix April 1 to 30, 3 deaths
India Calcutta, March 31 to April 20 311 deaths
Russia Government of Volhynia March 17 to April 6, 112 cases 13 deaths, Podolia, March 24 to April 13, 22 cases, 13 deaths

YELLOW FEVER—FOREIGN

Brazil Santos March 16 to 23, 76 cases, 50 deaths, April 17 to 20, 105 cases, 70 deaths
Mexico Vera Cruz, May 9 to 16 1 death
Porto Rico San Juan, April 17 to 24, 1 death

MISCELLANY

Personal Notes —Among the new F R S, are Professor Macewen of Glasgow University, Dr S Martin the physiologist and Mr W H Power of the Local Government Board Three out of the annual fifteen are of the profession

M Maurice Delafon and staff will have charge of an International Sanitary Exhibition, to be held at Paris, beginning June 1, and continuing to September 15 Members of the President's cabinet and various learned societies are to be the patrons of the undertaking

Dr Allan McLane Hamilton of New York City and London, has concluded to take up his residence in the latter city during May June, July and August—the London "season" each year He will resume his New York practice after the summer holidays are over The precedent of an American medical man setting up in practice in London for a part of the year, was set by Dr S Weir Mitchell of Philadelphia

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[1] Journal d Hygiene May 2 1885

Donations by the Vanderbilts and Sloans—The donations by the Vanderbilt and Sloan families to the cause of medicine, and the relief of the poor in connection with helping along the cause of medical education—as represented by the College of Physicians and Surgeons, New York—have amounted to $2,270,000 This sum has been given since 1884

Professor Dittel of the Vienna Faculty of Surgery passed his eightieth birthday on the 15th of the current month He is still very vigorous and bright, diligent and attentive to his class work He maintains a popularity that is not felt for all his colleagues

Relief for the Wounded in Madagascar—The Paris edition of the New York *Herald* states that Madame Felix Faure has sent to the Comite de l'Union des Femmes de France, of which she is honorary president, the sum of 5,000 francs contributed by M Max Lebaudy for those who may be wounded in Madagascar

A French physician, desiring to establish himself in Montpellier and not wishing to be too long about getting patients, went to work and systematically and noisily advertised the loss of a valuable dog The town crier was employed to announce a reward of $125 for the return of the animal This course caused people to talk and some of them to employ the newcomer It is said that this "dodge" was a success

Antiseptic Action of Iodoform—Stchegoleff shows that *in vitro* iodoform exercises a direct antiseptic action on cultures of human and avian tuberculosis A contact of forty-eight hours sterilizes a culture of human tuberculosis When introduced into the organism with living and virulent tubercle bacilli, iodoform diminishes their virulence without checking their development The agent does not act on the vitality of ordinary pyogenic microbes, but *in vivo* neutralizes their toxins[1]

A Camphor Famine—As one result of the Chino-Japanese war a camphor famine is now threatened, according to a London dispatch of the 25th ult, which says the price of camphor has rapidly advanced and Japan is placing the most severe restrictions upon its exportation Much of the camphor in England is held by a syndicate Should a warm summer bring cholera and dysentery the demand for camphor would be great and its scarcity will not only interfere with many medical compounds but will hinder the manufacture of smokeless gunpowder, in which camphor largely enters as an ingredient

Heroism of a Military Surgeon—The English papers refer with great pride to the gallant behavior of Surgeon Whitchurch in the Chitral campaign The following is taken from the *Medical Press and Circular*, for May 8 'Surgeon-Captain H F Whitchurch, attached to the 24th Bengal Native Infantry, performed a feat of exceptional gallantry on the occasion of the *reconnaissance* of March 3 from Fort Chitral Captain Baird fell mortally wounded, but Surgeon-Captain Whitchurch, although running serious danger of death or capture by the enemy, would not abandon him, but carrying the wounded officer on his back, fought his way back to the fort"

Filthy Card Catalogues a Means of Possible Infection—The *Independent*, for May 16, thus refers to the dirty old card catalogue of the Astor Library "It is remarkable that in this day of germs and germicides nobody has invented a sanitary library card catalogue Every one that recalls the unspeakable filth of the old and now departed card catalogue of the Astor Library must suspect that it was a highly effective agency in the spreading of disease The bound catalogue is perhaps even worse, for an attentive observer must often have noted that the average reader in a public library turns the leaves of the catalogue with the aid of a finger dampened by application to his own lips *The commercial exchange of germs* by this method *must reach a vast volume of transactions* in the course of a year"

A New Special Hospital for Diseases of Women has been opened at Montreal, Canada, under the patronage of the Countess of Aberdeen, wife of the Governor-General The staff includes Sir James Grant, M D, K C M G, consulting physician, Wm H Hingston, M D, LL D, consulting surgeon, A Lapthorn Smith, B A, M D, M R C S Eng, surgeon in-chief, H Lionel Reddy, C M, M D, surgeon, S F Wilson, C M, M D, assistant surgeon and registrar, Dr Sylvester, assistant surgeon, and Dr Letellier de St Just, assistant surgeon The hospital is absolutely free to women who are poor and sick, and who are residents of the city Patients from outside the city will be admitted on payment of a nominal charge

Pleurisy with Effusion Cured without Operating—Bosch reports a case of a little girl of 9 who entered the hospital with all the symptoms of right-sided pleurisy, the left side measured 27 5 ctm, the right 28 7 The swelling extended to the third rib, respiration 46, temperature 38 1 degrees C Before resorting to thoracentesis, the author determined to try medicinal agents and if these failed to operate Treatment—milk diet for eight days, cantharidal collodion as a revulsant, citrate of magnesia and calomel as purgatives, digitalis, strophanthus and nitrate of potash as diuretics Under this treatment the effusion rapidly diminished and the patient left the hospital after a month's time completely recovered[1]

A Missouri Giantess—A very tall Missouri lady lives at Price's Station, in Scotland County Her name is Ella Ewing, her height is eight feet and two inches, weight 287 pounds, head and hands large, size of shoe is nearly seventeen inches She is not slender but fairly well provided with adipose Judging from a photograph no want of anatomical symmetry is apparent, unless it be an excessive length of the lower extremity The femur is especally open to comparative measurement at some future time, when it will likely be found the longest bone in the body of herself or any other living Missourian Her age is not stated, but the photograph is that of a young lady not long out of her teens, however long she may be by other standards She is reported as intelligent, fairly well educated and of a devout temperament Her father is reported as a sixfooter, while her mother is of the average height of women

Constipation in the Young—Marfan says that a nursling should have two to four stools a day during the first two months, and one to two after the first year Whenever they are less frequent, constipation is present Transient or habitual constipation may be due to retained meconium, stricture of intestine, atresia ani, symptomatic constipation to febrile states, cerebral disorders, alimentary constipation to simple or sterilized cow's milk, excess of casein or mineral waters, deficient sugar or fat, congenital constipation to intestinal occlusion, excess of length or folds of the large bowel Consequences—rectal prolapse, umbilical hernia, invagination of the bowel, convulsions, prurigo, urticaria, eczema, anal fissure, mucous, serous or ulcerative colitis Treatment—alimentary of nurslings, a little sugar water (Jacobi) cow's milk 4 parts to 100 of sugar water, congenital lavage by the urethral catheter, two tablespoons ful of glycerin to one liter of water or two tablespoonsful of oil with the yelk of an egg to 60 grms of water, massage, electricity, suppositories for fissure, no laxatives before three months, no purgatives during the first year[2]

A Philadelphia Incident—The Philadelphia *Record* is authority for the following case of dislocation of the inferior maxilla The *Record* calls Dr Pancoast "a considerate physician" "A downtown woman, who justly bears the reputation of a common scold, recently became so enraged at some action of her inoffensive husband that in endeavoring to do justice to her feelings she threw her jaw out of place,

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[1] Arch de Med Exper, March, 1895

[1] Revue Int de Med et Chir Prat, 1895, No 5

[2] Jour de Medicine, Feb 8, 1895

Of course, she was immediately silent and her husband, although he hurried with her to Dr Pancoast's office experienced a sensation he had not known for years, for he berated his wife soundly and received no words in reply Perceiving that the woman was impatient to give her husband a scolding Dr Pancoast purposely allowed her to wait for half an hour, while he attended to others and then, telling the husband to get out he threw the jaw back in place However he placed a tight bandage under her chin and advised her to keep it there some time, in order to give the husband a much needed rest"

Rank in the British Army Medical Staff—Under the heading of 'War Office Administration" the *London Times* discusses, among other matters of sanitary interest, the questions of rank and title of medical officers It avers that medical officers may occasionally be seen drilling hospital attendants as if they were infantry soldiers, and refers to their plea to sit on courts martial as one that will probably soon be admitted 'Surgeons Major-General require medical officers attached in a staff capacity to act as the medium of communication between themselves and other departments, and when a heedless young regimental officer is liable to be officially reported for applying to his medical attendant the honored title of "doctor" it is clear that all proper professional pride is in danger of being lost Even the essential requirement of a distinctive uniform has dropped out of sight and an expert is needed to differentiate the Medical from the Army Staff In striving to be what he is not, the army doctor will inevitably fail in the exercise of his rightful, honorable, and indispensable functions To fighting rather than to saving life his ambitions will tend Meanwhile the necessity for converting naval doctors into admirals, post captains and commanders does not appear to have yet arisen Medical science in the Navy does not seem to be a source of shame to its professors who, moreover, wear distinguishing marks well understood by the navies of all foreign powers" This represents the Horse Guards or military view of the question, but according to the *Lancet*, army medical officers regard the matter from a wholly different standpoint The only thing that confers any authority, power or standing in the Army is military rank, and so long as medical officers form part of the Army and are not civilians they should possess adequate rank if they are to discharge their duties efficiently As regards the alleged or suggested incompatibility of military rank and title with professional zeal and merit they consider this a ridiculous assumption and point to the organization of the medical services of other nations,—America and continental Europe—in which medical officers possess such titles and fulfill all their professional duties with entire efficiency and satisfaction

Operative Methods in the Sacral Region.—Borelius has studied the anatomy of the sacral region from a practical and operative standpoint on twenty-nine cadavers—twenty males and nine females In order to gain access to the upper part of the rectum the method of Rehn Rydygier is recommended, for the uterus and the upper vagina, that recently proposed by Hochenegg The author operated once by the former method, but vesical paralysis followed the operation and lasted for two weeks In order to avoid this Borelius has invented a method of sacral resection so as to reach the upper part of the rectum and at the same time avoid the sacral plexus, so important for innervating the bladder and anus The method is as follows and has been tried in four cases without any bladder trouble or any other inconvenience 1 Incision of the skin and soft parts in the median line from the posterior inferior spinous process of the ilium to the lower end of the coccyx down to the bone, from the coccyx the line deviates to the right, following the lower border of the gluteus maximus, denudation of the right border of the coccyx and sacrum to the right sacrosciatic ligament 2 Section of the bone in an oblique line touching the lower border of the fourth posterior sacral foramen on the right, and the third on the left, during the operation the bony flap is held toward the left and replaced when done The advantages of this over the Rehn-Rydygier method are 1, the incision in the skin and soft parts is more simple and more favorable to healing, 2, the sacro sciatic ligaments on each side are left intact, also the fourth sacral nerve, 3, the muscular connection between the anal region and the lower end of the coccyx is also untouched To reach the uterus through the sacrum Borelius prefers the method proposed by Hochenegg in 1892, with a slight modification In order to preserve the connection of the anal region with the bone, instead of extirpating the coccyx like Hochenegg he makes a temporary resection of the bone and when the operation is finished replaces the coccyx In two cases operated on by this method recovery was complete[1]

Sanitary Supervision of Public and Private Hospitals—Very delicate questions often arise between the sanitary authorities and the hospitals that receive a share of the municipal moneys Nearly all superintendents of hospitals if left to themselves will decline to accept certain "troublesome cases," as noisy alcoholized persons And they as well as the ambulance surgeons have been known to jump at a diagnosis of "drunk," when there was an unrecognized fracture at the base of the skull, plus a history of dissipation In Brooklyn, complaints having been recently made to Health Commissioner Z T Emery, that deaths had taken place of persons consigned to the police precincts when they might have had a chance for their lives if brought under hospital treatment, he held conferences with the superintendents of the leading institutions, and others, with a view to preventing the future occurrence of avoidable 'accidents" of the nature complained of The superintendents were heard on their own behalf and on the behalf of their surgeons of ambulances As a result it was determined that those hospitals of Brooklyn that partake of the excise funds shall be placed under a clearly defined set of regulations These will be enforced to the best of his ability by the Commissioner, but his power of discipline over the institutions will probably be accepted without serious contest The following list of special regulations has been served upon the various institutions "Although the accusation of inhumanity, occasionally made against the hospital authorities and ambulance surgeons of this city is generally undeserved, it must, nevertheless, be admitted that, unfortunately, such is not always the case, as there have come to my knowledge certain well authenticated instances of patients in a dying condition having been refused transportation by ambulance surgeons, and of others who have been denied admission to hospitals which are under contract with the city to care for the sick and poor In order to diminish the possibility of the future occurrence of these deplorable mistakes, your attention is called to the following rules, which take effect immediately

'1 All ambulance surgeons must be appointed by the Commissioner of Health, but the candidates nominated by the hospital superintendents will be accepted if they present satisfactory evidence of the possession of the proper qualifications for the position

2 The hospital that is under contract with the city to treat the sick poor must maintain an emergency ward, containing not less than two beds, for the temporary reception of ambulance cases This ward is to be used for no other purpose

3 When an ambulance case is brought to a hospital from the latter's own district, the patient must be promptly admitted Whether he shall be retained or not may be determined later

4 Cases of grave injury or sickness must be admitted even when brought from another district

5 Cases of delirium and insanity, when brought in an ambulance must be admitted and cared for until they can be transferred to the department of charities

6 Unless the free beds are all occupied no application for hospital treatment is to be refused without a medical examination

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[1] Nord Med Arkiv., in Rev Int de Med et Chir Prat 1895 No. 5

The Military Surgeons—The National Association of Military Surgeons met in Buffalo, May 21 Brigadier General George M Sternberg, U S Army, presided Mayor Edgar B Jewett welcomed the Association in the name of the city of Buffalo, and the President of the State Medical Society, Roswell Park, M D, in behalf of the profession Responses were made by General Sternberg and Major Briggs

Many interesting papers were read, of which the JOURNAL expects a full abstract next week The meeting was one of the most successful yet held One of the interesting features of the meeting was the presentation of a silver shield suitably inscribed to the founder of the organization Prof Nicholas Senn, at present Surgeon-General of the Illinois National Guard

Philadelphia was selected as the next place of meeting and the following were elected as officers for the ensuing year

President—Louis W Reed, Colonel and Surgeon-General, N G, Pennsylvania

First Vice President—Albert L Gihon, Medical Director U S Navy

Second Vice President—Col Charles H Alden, U S A

Secretary—Eustathius Chancellor Lieutenant Colonel and Medical Director, N G, Missouri

Treasurer—Lawrence C Carr, Major and Surgeon, N G, Ohio

Operating Rooms and Laboratories at the Hospitals of Military Posts—To the recent inspection of a number of military posts by Surgeon-General Sternberg is probably due the issuance of the following circular of instruction in relation to antiseptic surgery and chemic and bacteriologic investigations

It is presumed that medical officers are fully alive to the requirements of modern aseptic surgery, and even at isolated and frontier posts have, in operations they have been called upon to perform, carried out the principles of asepsis with the apparatus at hand

In every post hospital, a room should, if possible, be set aside as an operating room Especial attention should be given at all times to the cleanliness of this room, including its walls and floors, as well as the necessary furniture A stout table, of suitable size and plain finish, that can be easily scrubbed, should always be in readiness In this room should be placed all the instruments and dressings, antiseptics, anesthetics and other appliances that may be needed in an emergency While always accessible, they should be guarded from handling by irresponsible persons The Arnold sterilizer and the boiler of the kitchen stove or range afford ready means for sterilizing instruments dressings, basins, towels, etc, that may be needed at an operation

At the large permanent posts, if no suitable room is available, plans and estimates should be forwarded for such changes in or addition to the hospital building as will provide a conveniently located operating room

The Surgeon-General also desires that provision should be made for a small laboratory, in which the chemic and bacteriologic sets furnished can be conveniently arranged, so that they may be always ready for use When apparatus furnished for diagnostic purposes or for use in the investigation of questions in pathology or hygiene is left in the storeroom, unpacked or upon the shelves the fact that it is at the post will often be overlooked, especially by junior officers who are not responsible for the property

The following articles will be furnished, on requisition, to those posts at which the post surgeon reports that a room is available for use as an operating room

1 operating table
1 case for instruments[1]
1 table for instruments
1 case for dressings, etc[1]
3 operating gowns for surgeons and assistants
1 surgical cushion, Kelly's
1 dozen tubes, Fowler's, catgut and silkworm gut, assorted sizes
1 dozen spools, Halstead's for silk ligature
1 dozen brushes for cleansing
1 kilo green soap

ENAMELED WARE

1 instrument boiler
2 wash basins
4 basins for sponges, etc
2 pitchers
2 pails
2 trays for instruments

GLASSWARE

1 Petri's dishes for needles, etc
2 small jars, covered for ligatures, etc
4 larger jars, covered, for dressings, etc
6 flasks for flushing solutions
6 one gallon bottles, g s, for antiseptic solutions

Society Notes

THE Jackson County, Mo, Medical Society held a regula meeting in Kansas City May 23——The annual meetirg the Missouri State Medical Society was held May, 21, 22 a 23 The following officers were elected for the ensuing year President, E Leslie Hall, Kansas City, Vice President: Drs J H Thompson, Kansas City, H C Schutte, Wes Plains, J D Potts, Boonville, J J Russell, California Recording Secretaries, F R Fry, St Louis, and T B Hal Marshall, Corresponding Secretary, C E Wainwrigh Kansas City, Treasurer, C W Thompson, Jefferson Ci ——The Sioux City Medical Society held its annual mee May 15 The following officers were elected for the year President, R D Clark, Akron, Vice-President, Van Buren Knott, Treasurer, A C Bergen, Secretary, W J White——The annual meeting of the Morris District Medical Society was held at Dover, N J, May 14 The following officers were elected for the ensuing year President, D B Evans, Morris Plains, Vive-President, H N Day, Butler, Secretary, Levi Farron, Middle Valley, Treasurer, John S Stiger, Mendham

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S *Army, from* May 18 1895 to May 24 1895

Capt ROBERT J GIBSON Asst Surgeon, will be relieved from duty at Ft Sam Houston Texas by the commanding officer of that post and will report in person to the commanding officer, Ft Thomas, Ky, for duty at that post

Major WILLIAM H GARDNER Surgeon is relieved from duty as attending surgeon and examiner of recruits at Hdqrs Dept of Dakota and ordered to Ft Reno Oklahoma Ter for duty at that post, relieving Major HENRY M CRONKHITE Surgeon

Major HENRY M CRONKHITE Surgeon, is granted leave of absence for four months on surgeon s certificate of disability with permission to leave the Dept of the Missouri to take effect on being relieved from duty at Ft Reno, Oklahoma Ter

Capt LOUIS W CRAMPTON Asst Surgeon is granted leave of absence for ten days to take effect from the date of the conclusion of his examination for promotion

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending May 18 1895

Asst Surgeon L L YOUNG, to examination for promotion

P A Surgeon F W OLCOTT from the ' Constellation,' and to the Enterprise"

LETTERS RECEIVED

American Laundry Machinery Co, Cincinnati, Ohio

Bettman Boerne Chicago, Ill Bulkley L Duncan New York N Y Berg, L Munthe Laredo Texas Bradley J S Madison Wis (2) Bigelow, C P Grand Rapids Mich Brayton, Laura F Chicago, Ill Bushnell, K A Little Falls N Y Bacon, L C St Paul Minn

Cleaves, M A New York N Y Cook C E Mendota Ill Currier, C C, New York, N Y Cheney, W T, San Francisco Cal, Caldwell, B D Chicago Ill

Dight C F New Orleans, La Dent Wm M Newburg, W Va

Garwood, Alonzo Cassopolis, Mich Galbraith, T S Seymour Ind

Hummel A L Philadelphia Pa (5) Ham & Carver Dubuque Iowa

Jelks, J T Hot Springs Ark

Klebs E, Asheville, N C Kinnaman A S, Cleveland, Ohio Koppitz Melchers Brewing Co Detroit Mich

Lautenbach L J Philadelphia Pa LeGrand, Jno C Anniston, Ala Leedom Chas, Philadelphia, Pa (2)

Meriness Dwight Milwaukee, Wis Monarch Cycle Mfg Co Chicago Ill Martinet, J F Baltimore, Md Milliken, Mark, Hamilton, Ohi Momery H A, Marietta Pa

Newman, H P Chicago Ill

O Brien M C New York, N Y

Pennington J R, Chicago, Ill Parry J W, New York N Y Pierson Allen Spencer Iowa Peck, Geo, Cooperstown, N Y

Robins, W L, Washington, D C

Smart Chas Washington, D C Silverstien A B St Louis Mo Smith, W S, St Clair Minn Sykes R D, Chicago Ohio

Thomas A Malvern, Ohio

United States Heater Co Detroit Mich

Woodburn F C Indianapolis Ind Wishard W N Indianapolis, Ind Woodburn Frank Philadelphia Pa Watkins W W Moscow Idaho Wyckoff R M Brooklyn N Y Webster, L J Oakland, Cal Williamson, A N, New London Conn

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[1] NOTE—Authority will be given for the purchase or manufacture of these cases at the post if they can be so obtained at reasonable price

The Journal of the
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Vol. XXIV CHICAGO, JUNE 8, 1895 No 23

ORIGINAL ARTICLES

HYDROTHERAPY IN FEVERS, ITSRATIONALE AND TECHNIQUE

Read in the Section on Practice of Medicine at the Forty sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY ALBERT H BURR PH B, M D
PHYSICIAN TO PROVIDENT HOSPITAL, CHICAGO ILL

In every febrile condition, whatever its specific cause, there is exhibited a complexity of abnormal physiologic activities, a reaction of the animal system dependent upon the essential properties of protoplasm and nerve energy. The most obvious of these disturbed functions common to all febrile conditions are increased oxidation, elevation of temperature, increased though still inadequate elimination of waste products, increased frequency and weakened force of the respiratory and cardiac impulses, perverted metabolism and loss in muscular tone and neural vitality

Heat energy in the healthy body is the result of chemic change in its proteids, fats and carbo-hydrates through processes of oxidation Welch in his Cartwright Lectures, maintained that the production and dissipation of heat is kept in equilibrium in health by the direct control of a heat regulating nervous system He affirms that 'fever producing agents act directly or indirectly upon this nervous mechanism which regulates the harmonious relations of heat loss and heat production " In like manner we may conclude that all the disturbances of physiologic functions manifested in the state we call fevers are, in reality, so many symptomatic expressions of a toxic derangement of neural resistance and neural control

The efficiency of any measure instituted for the treatment of these functional disturbances will depend upon the reliability of our knowledge of the invading causes and the processes by which these disturbances are accomplished All therapeutics aimed at symptoms or effects instead of seeking to remove or limit these causes where possible or to reinforce neural resistance and control against them are certainly irrational and may be worse than useless The search for specific remedies carried on for ages has brought to light but two that approach specific results in fevers With all our increased knowledge of the special germs which produce each characteristic form of febrile disturbance, we are still unable to expel the invader and, with the exceptions noted above, the relentless warfare is continued until immunity is established on one hand, or, on the other, death ends the conflict During these ages the battle has been waged against that chief symptom and bugbear, elevated *temperature* The patient has been depleted by purgatives and venesection, he has been starved and sweated by turns, the nervous energy of his heart has been depressed by cardiac sedatives to lower his temperature The introduction of the coal-tar antipyretics marked the culmination of the antithermic craze Experience has taught every teachable physician that only harm can come from artificial antipyretics It has been demonstrated that they impair neural resistance and control, that they obtund nerve sensibility and retard metabolism and the elimination of normal waste and morbid products

Pyrexia may be considered normal to every febrile disease Indeed, it may be one of nature's conservative processes in the systemic reaction of protoplasm and nerve energy against the offending infection It may be a useful ally in combating, limiting or destroying the invading microbe, just as inflammation through processes of reaction throws up its defensive walls to the enemy If this be true, the normal temperature of any febrile affection can not be interfered with by direct artificial antipyretics without injury to the patient Normal reduction of temperature must be secondary and a natural sequence to the limitation or removal of the trespassing cause

The treatment of fevers by the cool bath is as old as the teachings of Hippocrates, and yet so new, by reason of the apathy of the profession and neglected study of its rationale, that even most medical teachers and writers of text books seem to understand but imperfectly the scope of its physiologic actions and its therapeutic possibilities

Hydrotherapy properly used in fevers is not hydropathy, is not a panacea, is not primarily antipyretic, is no longer empiricism The classical demonstrations of Winternitz, Voit and Schuller in Europe, of Baruch, Draper and Thayer in America, have clearly defined the basis of its physiologic action and placed it in the front rank of rational therapeutics A brief summary of their investigations shows that the cardinal principles of the physiologic action of the cold bath in fevers depend

1 On the physical properties, thermic and mechanical, of water itself acting directly as neural stimulants Water absorbs heat and parts with it quickly It may be applied in solid, liquid or gaseous form to the whole body or any part of it Its application may be continuous or intermittent, alternating from hot to cold, or modified by any desired temperature or pressure In short, we have always at command a most flexible agent with which to meet a wide range of indications

2 On the susceptibility of the sympathetic nervous system to these stimulants and its control over the vascular and glandular organs of the body This stimulative action takes place primarily on the cutaneous surface The skin is a threefold organ, at once the richest in sensory nerves, the greatest in vascular expansion, and the largest in glandular supply of all the organs of the body What a field for therapeutic operation! How easy of access and how

quick to respond! Every physician has noted the effects of the rapidly alternating cold and hot bath in resuscitating the asphyxiated newborn babe No harm results to the delicate infant, no one charges cruelty when these extremes of thermic effects are thus employed In syncope what can bring the flush to the pallid cheeks and reestablish respiration so quickly as a stimulating dash of cold water upon the face? In hysterical paroxysms how quickly the explosions of an unstable nervous condition give way to perfect control through tonicity imparted by the same mechanical and thermic effects of water We need not multiply instances to show that the stimulating properties of water, appropriately used, are responded to by prompt and definite physiologic activities

3 On the reflex action of the stimulated nerve centers, on (*a*), respiration, (*b*), circulation, (*c*), metabolism, (*d*), elimination, and (*e*), pyrexia

(*a*) Stimulation of respiratory centers is the first and immediate reflex action from the application of cold water to the cutaneous surfaces Deep spasmodic inhalations take place and improved oxygenation of the blood is at once manifest

(*b*) Circulation is quickened by reaction on the cutaneous vascular system, which is heightened by friction In this way the relaxed capillaries are given muscular tone and are successively emptied and filled by cutaneous massage The impulses thus set up are conveyed throughout the whole vascular system, relieving stasis and organic congestion, and in conjunction with improved respiration stimulate the cardiac centers and a slower, steadier strengthened impulse of the heart is definitely established The effect on the circulating medium itself is still more wonderful Winternitz, at the International Congress at Rome last spring, gave the results of some recent investigations of thermic effects on the composition of the blood in health He demonstrated that all applications of cold to the entire or greater portion of the surface of the body, when proper reaction was secured, led to three remarkable results, viz , an increase in the number of leucocytes, an increase in the percentage of hemoglobin and an increase in the specific gravity of the blood Local applications of cold, followed by reaction, accomplished the same results in the local blood supply This affords us now for the first time a rational instead of empirical basis for the employment of cold compresses and poultices

Thayer, of Johns Hopkins, has shown that blood drawn from the lobe of the ear of a typhoid fever patient after a Brandt bath, had three times the number of leucocytes as blood drawn from the same source just previous to the bath It is not credible that so great an increase in the number of leucocytes can take place by reproduction in so short a time, but it is probably accounted for by the increased activity of the circulation, under the stimulus of cold and friction which sweeps them from out of-the-way places into the quickened circulation (Baruch)

(*c*) Metabolism, both constructive and destructive, is greatly promoted This is a natural sequence of the improved blood supply carried to the glands and tissues Schwann first employed the term to express the changes wrought by living cells upon substances coming in contact with them This is constructive through nutrition and destructive through tissue change The action of the leucocytes, may be considered a form of destructive metabolism and takes place in the blood, glands or tissues wherever the toxins and microbes of fevers are found The investigations of Vaughn and others show that the antitoxic and antiseptic effects of the blood are due to leucocytes and their nucleins derived from their cell contents When leucocytosis was increased the antiseptic and antitoxic power of the blood was also increased If, then, it is established that cold baths, under proper reaction, increase these leucocytes in the circulation even to threefold, then the destruction of microbic products must be wonderfully increased

(*d*) Elimination of toxic products through the emunctories is *increased* by *the improved functional* activity of all of these organs, as a result of increased pressure, and improved blood supply Juergensen demonstrated that the specific gravity of the urine was increased after the cold baths through increase of urea Roque and Weil demonstrated that the toxicity of the urine was increased sixfold after the Brandt baths in typhoid fever, while by the expectant plan of treatment it was only twofold, and when antipyretics of the coal tar series were used it was the same as or even less than that of normal urine Liebermeister and Voit showed that cold baths in fevers greatly increased the elimination of carbondioxid by the lungs

(*e*) Pyrexia is a symptomatic expression of a toxic derangement of neural resistance and control When the nerve centers begin to recover from the profound intoxication which has disturbed neurotic equilibrium, abnormal temperature begins to subside Heat reduction, therefore, is a resultant of the combined effects of the cold baths on respiration, circulation, metabolism and elimination It begins to approach the normal status in direct proportion to improvement in these physiologic processes, and is secondary and incidental to them Nor is heat reduction due in any considerable degree to heat abstraction If it were so the temperature would begin to rise again as soon as the cold applications were discontinued On the contrary, I have observed time and again that the temperature continues to fall until it reaches the lowest point in one to one and a half hours after removal from the Brandt bath, in typhoid fever By repeating the bath *pro re nata*, as indicated by the toxic effects on the general condition of the patient, to which the temperature alone is not always an infallible guide, we can more safely and definitely enhance the resistance of vital forces against toxic agencies and promote their elimination than by any known symptomatic drug treatment As the surgeon gives free and open drainage to the products of infection in a septic cavity so may the physician, by cold baths with reaction, favor the physiologic drainage of toxins from a body charged with thermogenic poisons It is a mistake, and a generally prevalent one also for which our text-books are largely at fault, to regard the cold water treatment of fevers, especially that of Brandt in typhoid as an antipyretic measure chiefly Hence resort is had to less troublesome but more dangerous means of reducing temperature Pepper's System of Medicine, vol i, p 327, says concerning the various applications of cold water in typhoid fever "They all act in the same manner and depend for their efficacy upon their power of abstracting heat from the body and are useful just in proportion as they do this"[1]

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[1] Pepper, Vol 1, pp 117-118, last edition, 1893 Undoubtedly, one of

Nothing can be more misleading Brandt, who published his paper on "Hydrotherapy in Typhoid Fever," in 1861, made no such claim for his treatment He attributed its benefits to the stimulative effects primarily with fall of temperature as a secondary result Heat reduction in continued fevers *per se* is of little practical value It is not heat but poison which is the disturbing element Heat is a symptom, one of the effects of the operating toxemia Heat reduction in itself can not eliminate toxins or destroy microbes, and all therapeutic measures used for antipyretic effects which do not limit or remove disturbing causes, are both unscientific and absolutely dangerous Experiments just cited prove that artificial antipyretics are worse than useless, in that they retard toxin elimination

Upon these deductions rest the claims of hydrotherapy as a rational and scientific treatment in fevers If we have rightly interpreted the physiologic activities which are stimulated by the appropriate thermic and mechanical effects of water, then we have at hand an agent universally adaptable to the treatment of all thermogenic diseases No known drug remedy can so quickly and definitely influence the functional activities of living cells in nerve, gland or muscle, or protoplasm itself, as water when appropriately used in fevers

If clinical experience is the highest court of appeal in all therapeutic questions surely the evidence is overwhelming, and the medical profession of America must stand convinced of its truths, and convicted for its apathy towards so great a life saving measure It is not the province of this paper to give the clinical evidences, statistics and opinions of eminent men who have had large experience with hydrotherapy in fevers We refer to the latest editions of Strumpel, Hare, Osler and that most excellent little book, "Uses of Water in Modern Medicine" by Simon Baruch

It is sufficient to say that in over one hundred thousand tabulated cases of expectant treatment of typhoid in hospitals, the mortality has been 21 8 per cent With mixed treatment consisting of medicines and the cold bath, more or less fully carried out, the percentage of mortality has decreased just in proportion as efficient bath treatment predominated Under strict cold bathing alone, in over three thousand cases a mortality is recorded of 1 8 per cent Brandt reports 2,150 cases where this treatment was begun before the fifth day, without a single death

It is conclusive that the earlier this treatment is instituted the more favorable the results My own practice is not to wait for a diagnosis but to institute some appropriate bath for all fever patients at once Nothing but good can come of it, no matter what the diagnosis, and in the event of typhoid everything is to be gained Where the life of the patient is in jeopardy no unavoidable risks can be taken by the attendant, without censure

TECHNIQUE

The technique of hydrotherapy in fevers has been fully described and illustrated by the authors just cited, but apparent difficulty in carrying out proper measures in general practice has led the majority of the profession to believe it practicable in hospitals only Accordingly halfway measures, like ablutions, spongings and cool packs are substituted Measures which in no way meet the indications of the full bath Others ignore bathing in any efficient form and still adhere to the expectant plan or to symptomatic medical treatment, with indifference to the old-time mortality

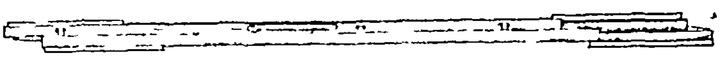

Fig 1 —Frame folded

The most efficient of all hydrotherapeutic measures in the treatment of fevers is the full bath There are certain obstacles in the way of putting it into practical use, chief of which are

1 Entire absence of, or imperfect facilities in, the home for giving the full bath

2 Dangers and annoyance to the patient, from handling to and from the tub, in another room, or even at the bedside

3 The exhaustive labor imposed on attendants

4 The objections and prejudices of patient and friends to the discomfort of the plan as ordinarily carried out

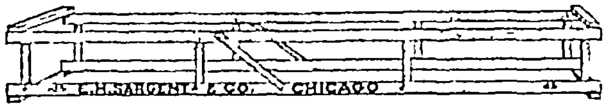

Fig 2 —Frame open

To overcome these by no means trifling objections I have devised a portable folding tub for use in the bed of the patient, which I believe will commend itself at once for the ease with which it may be employed under all circumstances with the utmost comfort to the patient and attendants and prove a valuable addition to the technique of cold baths in fevers It consists first, of a large rubber sheet with rings attached by elastic tapes near its margins, and of a crib-like wooden frame with fastenings along the outside of the lower rail, to hold the sheet when in use This frame can be folded into a space two by three inches by eight feet long when not in use The accessories are a three-quarter inch hose with a metal elbow for a siphon, a bath thermometer and a sponge of good size

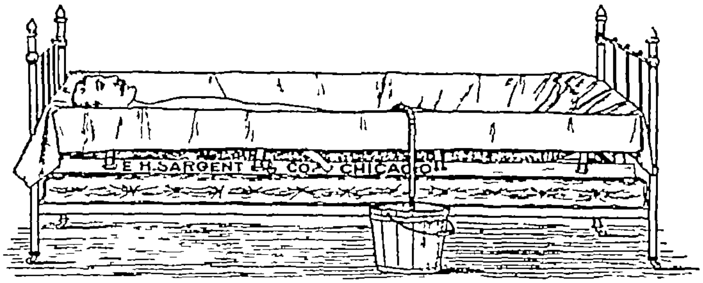
E H SARGENT & CO CHICAGO

Fig 3 —Tub complete, with siphon in operation

In use, the sheet is first slipped under the patient and brought up over the pillow, and its edges tucked up alongside the body The frame is then unfolded and placed down over the patient pillow, rubber sheet and all The edges of the sheet are now drawn up over the top rail of the crib and down the outside to the lower rail where it is held fast by its rings This completes a light and perfect tub capable of holding twenty gallons of water, if desired, and capable of being emptied quickly by the large siphon

The bath is now initiated with the patient resting

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the most important indications which must be met in the great majority of cases of typhoid fever is that for reduction of temperature A large proportion of this mortality (in typhoid) comes directly or indirectly from the baleful influences of the pyrexia The only way in which this can be met safely and effectually is by the external use of cold water Flint Of all therapeutic measures those directed toward the reduction of the fever take the first rank Pp 029, edition 1894 comfortably on his own mattress and pillow, with but slight disturbance Any gradation of temperature from 90 degrees down to 65 degrees may be employed, or changed rapidly or slowly as desired, while friction over the entire body by constant rubbing is practiced for ten or fifteen minutes The bath completed, the water is siphoned into tubs or buckets on the floor Any excess is sponged up, the edges of the sheet are then unfastened and dropped inside the frame, which is lifted, folded and set away The sheet may be slipped from under the patient or remain at will, with fresh linen over it, for the next bath

The many advantages derived from this simple and comparatively inexpensive tub are so evident as to require no enumeration Spongings or ablutions, however well done, can not take the place of tubbing They are feeble substitutes and fall short of the chief effects of the full bath, viz the greater reflex stimulation with corresponding sequelæ engendered by the contact of cold water over the entire cutaneous surface Cold packs preclude the constant chafing and friction over the whole body which is an essential feature of the full bath to maintain tonic reaction of the cutaneous circulation These less rigorous methods, however, may serve to educate the patient in the beginning and lead up to the more effective full bath

If one chooses to employ the graduated bath of Ziemssen, which consists in gradually reducing the temperature from 90 degrees to 72 degrees for half an hour with gentle friction, a plan much in favor at the Tubingen University clinics, or the prolonged warm bath of Dr L Riess of Berlin, which consists in immersing the patient in a bath at 88 degrees whenever rectal temperature reaches 102 degrees and continued through the day, or day and night if necessary, till temperature in rectum registers 100 degrees, then the comforts and utility of the tub here presented are still more manifest

The day is at hand when the therapeutic resources of water no longer, dictated by empiricism, but placed on a firm and rational basis should be mastered by every conscientious practitioner of the healing art Until specific medications have become established, we must yield to the claims of one of its early apostles "Febrifugum Magnum, or Common Water, the Best Cure for all Fevers" (Dr Hancock, Lothbury, Eng, 1723)

DISCUSSION

Dr Davis—I have been for a number of years a very hearty advocate for the use of the cold bath in typhoid fever I do not believe, however, that it in any degree shortens the course of typhoid fever, but it does make the fever very much less dangerous, and contributes to the patient's comfort It seems probable that the typhoid state so called, is the result of perverted metabolism It therefore appears likely from the results that we get clinically by the use of cold baths that by their employment we are treating more the typhoid state than we are the typhoid infection Hence we get a decided change in the appearance of our patients by the use of the cold bath They lose the mental dullness particularly if the bathing is begun very early, and we find our patients remaining cool-headed, with tongue and mouth moist, and there is an excretion of a moderate quantity of urine of a fair specific gravity In regard to this apparatus, it is extremely convenient, without any question whatever, and deserves a very general and large use For more than a dozen years I have constantly employed a rubber sheet, used as in this instance, placed under the patient lying in bed and drawn well up over the pillow, and then water is applied with large sponges so that a quantity accumulates around the patient Dr Burr's apparatus, however, makes it possible to give the full bath with just as little inconvenience as the method I have described

Dr Border of Pittsburg, Pa—In one of the principal hospitals in Pittsburg we have made use of the cold bath treatment, and clinical reports are very favorable However, there is a fact in the use of water that has not been touched on prominently, and that is the increased secretion of the skin, the most important of the three great excretory organs, the bowels, kidneys and skin The bowels may be constipated for three, four or five weeks I have known myself of a young woman who did not have a movement of her bowels for over three weeks, without any difficulty other than a slight tendency to drowsiness during the day We are all aware that the entire suppression of the urine will result in death, in the majority of instances, in less than twenty four hours I think we are also all aware that the entire suppression of the functions of the skin causes death in the majority of cases within three nours I think, then, in the use of the cold bath we lose sight of the importance of this, the most important of the three excretory channels

Dr Webster—May I ask the speaker what evidence there is to support his statement that if the secretion of the skin is suppressed for three hours death ensues?

Dr Border—I am not certain that I can recite precisely the experiments that these conclusions are based upon I think the statement came from Rome, Italy, many years ago, where several small boys, I think 4 or 5 years of age, were covered with gold leaf, and placed in a procession to go around the city for one or two hours Before the gold leaf could be removed from one apparently healthy child he had died

Dr Stockton—The important matter seems to be the therapeutic use of cold baths in the treatment of fevers as compared with other methods of treatment Two years ago, in the meeting of this Section in Milwaukee, this matter of the treatment of typhoid fever by cold water was before the Section, and I for one greatly regretted to see how many men of prominence throughout this country opposed the treatment, 1, because it was inconvenient, 2, because it was unnecessary, and 3, because it was dangerous to their patients It seems to me that it has been shown to-day that it is unobjectionable, and I think the experience of two years has confirmed the views of those of us who stood for cold bathing

Dr Summers, N Y—I desire to thank Dr Burr for his ingenious contrivance, which I shall try to avail myself of, and also wish to express the desire that others will speak for the cold bath, so that it may be used in small communities as well as in large hospitals At that meeting in Milwaukee you will remember that Dr Christian Sihler, of Cleveland spoke of his experience in the use of the cold bath treatment in the houses of the poor in the city

Dr S Solis-Cohen—I rise to congratulate the reader of the paper upon having made more possible the use of cold water in private houses, in small towns, as was just said My first experience with the use of water in typhoid fever began when as a student I went through the wards of the German Hospital of Philadelphia, in which the cold bath treatment of typhoid fever was carried out, though not with the rigor of the Brandt method, it was only applied in suitable cases, when thought to be necessary, and not with the thorough system laid down by Brandt The experiences there gained convinced me thoroughly of the utility of the treatment, and ever since I have been practicing medicine I have used cold water in the treatment of typhoid and other fevers with ever increasing success Some time ago a student of the University of Pennsylvania, Mr Boston, devised an apparatus upon the same principle as that shown here to day, which I tried to employ in two cases It was not as perfect in its details as this, a heavier rubber was used because such a sheet as shown here to day was not possible The great objection to that, instead of the full bath, seemed to be at variance with the experience related by Dr Davis The gathering of a small pool of water around the patient, instead of the full plunge at once into the bath, seemed not to be advantageous, and so, although I have continued to use this device in certain cases where immersion at once into the full bath was not practical, I am fully convinced that it is not equal to it The reduction of temperature by bathing is only an incident to the treatment, it is the effect not merely of the abstraction of heat, but of the removal of causes of pathogenic heat production

Dr Turck—Not only are we indebted to Dr Burr for the ingenious contrivance, but also for presenting to this Society the various facts elaborated that are known up to recent times of the effect on the circulation, upon the number of leucocytes, and also the effect that it has in elimination There is another point to be emphasized, namely, the restoration of the equilibrium of circulation We are not all dealing with typhoid fever, but how frequently we are dealing with cases of passive congestion of the viscera When we remember that a few vessels can contain all the blood of the body we can realize how readily this passive congestion can affect the metabolism of the body

Dr Pettijohn—While I commend heartily the explanation of the use of this apparatus, it seems to me a little mixed in the effects that we produce therefrom If we want to produce lower temperature, the cool water must be continually applied, and the effect produced is not from the cold application, but from the evaporation of the water on the body So if you pour water on one part and then on another, you heat it unequally, and therefore I maintain that the general sponge bath or keeping the surface of the body wet for a length of time is very efficacious in cooling the surface Provided you have congestion of the internal organs and desire to establish an equilibrium on the surface of the body, the application of cold, like a plunge bath, will at first contract the vasomotor system of the skin, and then the patient will react and the skin become red So you must produce not only evaporation but an even temperature of cold If our patients have not a bath tub in their houses, we can do a vast deal toward handling the surface of the body, and the establishment of the surface circulation, by simple continuous sponging If you want to produce evaporation put a thin cloth over the body, and sprinkle water over it

Dr Rochester—I think the last speaker is forgetting what the water is for, it is not simply for reducing the temperature, as was carefully stated by Dr Burr in his paper We want to know the tonic effect of the cold bath on the nervous system of the patient, that is the chief effect, and that is the point we should bear in mind Moreover, as far as the excretions of the skin are concerned, some of the speakers seemed to forget the matter of friction, which is most important It is not simply the reduction of temperature, but the effect upon the nervous system, and the friction plays a prominent part in this

Dr James Tyson, of Philadelphia—I want to say that from quite a large experience I feel with others here that every effort should be made by those who have experience to impress upon those to whom it is a somewhat inconvenient measure that under all circumstances cold bathing should be used in the treatment of fever The fact that it does give a good deal of inconvenience, and is a severe task upon the attendants and assistants I think is very decidedly obviated by this apparatus The use of the bath in the treatment of typhoid fever we do not exactly understand, nor do we understand its exact rationale It is very interesting to hear from Dr Burr as to the various explanations of the way in which it may operate The fact is, however, that although we are all ready to admit that it is not the temperature that we particularly desire to combat, still there is something which goes with the high temperature—whatever it is—and the high temperature is the index, and with its reduction goes the danger from this particular source I think it is desirable that we should not lose sight of the fact that it is not an invariable cure I have myself lost cases, particularly those which terminated in perforation and in hemorrhage which seemed not to have been reached in my experience I think Brandt says of the treatment that even in ulceration and hemorrhage, danger is averted if the treatment is begun sufficiently early This is a fact of importance which coöperates with what Dr Burr has said as to using it even where the diagnosis is uncertain Therefore, I think if there is any truth in what Brandt says, that we ought not to wait for diagnosis before this treatment is made use of As to the effects of sponging as contrasted with the cold bath, there is no doubt that the gentleman who last spoke is exactly right in what he says of the effect of evaporation in the cooling of the body, and that in sponging properly to secure this we get the best effects I have so often contrasted the effects of sponging carried out in the most careful and scientific manner, and the difference between that and the cold bath is so utterly trifling that even nurses say that it is like wasting one's time to administer the sponge bath when the plunge bath is available If the plunge bath is not available, we should have recourse to sponging

Dr Hollister—I would like to inquire of Dr Tyson his experience or his judgment of the use of the bath in scarlet fever

Dr Tyson—I have no experience

Dr J M Anders, Philadelphia—An article such as we have just listened to is certainly most refreshing, because while rational criticism which is always allowable, has dominated the clinician in the treatment of typhoid fever in the past, we have to day an effort made to furnish experimental data to show how the cold bath treatment should be used and how it does good It is an evidence of the fact that the scientific element of the profession have formed a procession, which is moving steadily in the direction of the treatment of the cause rather than the effect of pathologic processes—an evidence of great progress It occurs to me that a paper on the subject of the treatment of typhoid by cold baths must be incomplete without reference to contraindications I do not wish to make any unfavorable criticism upon the paper, as it is impossible to bring out all the points in a single article upon the subject To my mind, it is highly important, once hemorrhage has occurred, that the Brandt method should be omitted for a time After hemorrhage has taken place, the danger of its recurrence is made much greater by removal of the patient to the bath

Dr Sykes, of Ohio—I have listened to the paper with a great deal of interest and have no doubt that the method carried out is a good one Physicians who are practicing in small communities however, can not always get one of these tubs in time, but there is no town where you can not obtain some of the common oil cloth that is used for covering tables This might be procured and the patient placed on a low, old fashioned bedstead and the oil cloth used as a quite effective substitute for Dr Burr's apparatus

Dr Holt, of Ohio—I have treated typhoid fever very successfully, using shower baths and sponging all over the body, also, when necessary, flushing the bowel with cold water injections I am rather surprised to think that cold water has not been so generally used, because I used it for almost my first case of typhoid fever, some forty years since and I can recommend it to the profession It is an old treatment, and a rational one, and something everybody should employ in typhoid fever

Dr Burr—It is a matter of gratification to me to see the interest taken in the discussion of this paper It will be impossible to note in detail the comments made for and against this method of treatment I will refer principally to two or three points Dr Davis is right in his opinion about the shortening of the term of typhoid fever Brandt did not make such a claim for the treatment The great claim is that it does *modify* the fever in various ways The systematic carrying out of baths in typhoid fever, begun at an early date changes the whole clinical aspect of the case Some have claimed that this treatment increases liability to hemorrhage Liebermeister, who has had experience enough to give him some authority, distinctly controverts that Out of 861 cases without cold bathing there was 8 4 per cent of hemorrhages of the intestines, out of 882 with the cold baths the number of hemorrhages was 6 2 per cent , a difference of 2.2 per cent in favor of the cold baths One gentleman does not seem to understand that the reaction is kept up during the whole fifteen minutes by successively emptying and filling the cutaneous blood vessels by gentle friction over the whole body There would be a great risk in putting the patient in that tub of cold water without friction Drs Stockton and Summers referred to a paper read in Milwaukee I want to say that the paper of Dr Sihler, of Cleveland, in which he showed that this method was practicable in the poorest of practice, was what inspired me to get up something more convenient to be carried about and used than the ordinary tube Another thing with regard to the urine, the patients will frequently urinate in the bath, and keep up an increase in quantity This treatment is one of the greatest stimulants to the action of the kidneys that can be given

IRREGULAR OR ATYPICAL GOUT—HOW SHALL WE KNOW IT?

Read in the Section on Practice of Medicine at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md , May 7-10, 1895

BY JAMES TYSON, M D

PHILADELPHIA PA

It has always seemed to me that if the department of medicine as contrasted with surgery is to make advances, it must be by the application of accurate methods This is equally true of nomenclature as of clinical investigation In no subject in medicine has there been greater looseness in the application of terms than in that of gout, and in some recent studies of this interesting subject I have been so impressed with this fact that it occurred to me it might be worth while to attempt to formulate, briefly, criteria by which to judge of the presence of gout in its more irregular forms, with regard to which alone as contrasted with regular or typical gout the confusion really exists

While many theories have been advanced and many experiments performed with a view to explaining the method of its accumulation, all pathologists agree that the fundamental condition of gout is an excess of uric acid in the blood The shape in which uric acid exists normally in the blood has commonly been considered to be that of an acid salt, the biurate chiefly of sodium, also the chief constituent of gouty tophi Recently, Sir Wm Roberts has attempted to show with apparent success that it is the quadriurate, a salt shown by Bence Jones many years ago to be the principal constituent of the so-called amorphous urate sediment In this compound, four equivalents of acid are combined with one of soda It is nearly agreed to, that the local symptoms of gout are the result of an irritation produced by local deposits of the acid salt in the affected tissue Under certain abnormal conditions the normal quadriurate splits up into biurate and uric acid, the latter being eliminated by the kidneys, while the former remains in the blood until deposited, or the quadriurate may be transformed in the blood into biurate which may be deposited in different parts of the body But, while uric acid deposits in the joints and elsewhere are commonly the cause of attacks of pain, this is not always the case Tophaceous deposits are by no means always painful Hence some, and notably, Pfeifer who has lately done much experimental work bearing on the subject believes it is the uric acid in solution and not when deposited which causes the attack of gout

In true or typical gout we have a definite morbid state, the tendency to which is commonly inherited, but which may also be acquired, and corresponding to this set of definite symptoms These may also manifest themselves in an irregular manner and deree, constituting the irregular forms of gout Among hese, however, are constantly being included complexes of symptoms which are erroneously ascribed o gout, and it is with a view to point out and disourage such erroneous association that I have writen the present paper

It is more particularly irregular gout, under which re included certain ailments not legitimately ascribble to it This is not surprising when it is rememered that there is scarcely a form of visceral or exrnal pain, functional or organic derangement which as not been by some one or other declared to be outy in origin—often, indeed, with reason and proriety It becomes, therefore, extremely important hat we should elect some data on which to base a ecision, and the more so since gout is growing in requency in this country

First as to irregular gout whose existence has been cknowledged by all authorities on gout from the ime of Sydenham down to the present day What s it? A leading authority of the present day, peraps *the* leading authority, Sir Dyce Duckworth says Gout manifesting itself anywhere but in a joint is to be considered irregular or incomplete" He says further "Such phases of the disease may be anomalous, but they are very common, and as such are so far regular as to comprehend a number of ailments which pertain chiefly and in some cases exclusively to persons of gouty heritage and diathesis" Also "Without doubt many morbid states have often been flippantly or erroneously set down to irregular gout which own no such designation and thus a cloak for ignorance has always been at hand to throw over careless observation, ignorance or willful misinterpretation of symptoms" Both sentences last quoted sound very well, but when we attempt to look up the number of ailments "which pertain chiefly and in some cases exclusively to persons of gouty heritage and diathesis" they are hard to find, especially when we are informed by the same authority that the absence of tophaceous deposits, or of the history of an attack in a big toe, or of heredity, or of personal history, calculated to promote gout, does not necessarily exclude the ailments from the category of gout And further "that it is just in cases where no marked coarse objective signs of gout exist that we should look for the presence of the minor tokens of the affection, and just in such cases that we commonly find them" These statements are so contradictory that it is plain that nothing can be deduced from them I propose briefly to point out certain conditions under which ailments may be legitimately regarded as gouty, and though ailments truly gouty may sometimes be excluded by reason of absence of such conditions these must be very few It is to be remembered that we are speaking of irregular gout, for regular gout is easily recognized by definite symptoms which it is not my purpose to allude to.

It is in place, however, to name some of these ailments They include first in the words of another acknowledged modern authority on gout, Sir Prescott Hewitt "Dyspepsia, more or less troublesome, frequent deposits of lithates, slight eczematous eruptions from time to time, anomalous pains in various muscles, sharp deep-seated pain in the tongue, existing for two or three days and then disappearing altogether for a while, crackling about the cervical spine on slight movements, more or less, sometimes a mere suspicion of knottiness about the smaller joints of the fingers" The muscular pains may be anywhere and "flying" in nature, but the muscles of the back of the neck, the lumbar muscles, the adductors of the thigh and gastrocnemii are especially liable. The pains are apt to come on in the night and are bad in the morning on awaking, but improve as the day advances In addition may be mentioned articular pain, nodosities and deformities about the finger joints of other than tophaceous composition From these are to be excluded, except in very rare instances, Heberden's nodosities which are not usually of gouty origin but belong to rheumatoid arthritis which is distinctly not a form of gout—although unfortunately also called rheumatic gout Among them are, however, certain vesicular eminences on top of Heberden's nodosities described by Paget and Garrod

In the same category are included headache of every variety including migraine, tingling and pain in the palms of the hands and soles of the feet and heels, and tendo-Achillis, also follicular inflammation especially about the end of the nose, sclerotitis, corneitis and conjunctivitis with white spots (tophaceous) in the cornea and eyelids Asthma, bronchitis, tonsillitis and pharyngitis, dryness of the mouth and tongue are considered the result of gout Then there are the various skin affections, also gastric pain, flatulent colic, urethritis, orchitis, prostatitis and cystitis with hemorrhage into the bladder in men, and ovaritis, metritis, dysmenorrhea in women, as well as meningitis, neuritis, endarteritis and the whole category of affections known as visceral and retrocedent or metastatic gout, including gout of the stomach and heart and cerebral gout or *apoplexia arthritica* Various psychopathia including irritability of temper and capriciousness, especially melancholia with suicidal tendency, insomnia—all of these are at times of gouty origin In fact, as already stated, there is scarcely a single ailment which has not been ascribed to gout I will only allude further in this place to one of these symptoms of undoubted gouty origin the nature of which is often overlooked and that is hemorrhage into the bladder I have known a medical man given up by his attendants as hopelessly ill from malignant disease of the bladder, which was filled with blood, simply the result of gouty hemorrhage, as proved by autopsy several years later

In view of these facts, does it not seem necessary to establish some criteria whence we may judge whether the ailments mentioned which so evidently arise from many causes, are due to gout or not? Casting about for such, it has seemed to me that the following conditions may at least serve as a guide to aid one in determining the etiologic relations inquired after

It is plain, first of all, that if uricacidemia can be demonstrated to be present it may be regarded as strong presumptive evidence that any one of these events is gouty Unfortunately it is rarely possible to test this fundamental condition of gout, because of the want of the special skill and apparatus necessary for the purpose For it is to be remembered that uric acid deposits in the urine are no criterion of the quantity of uric acid in the blood This can only be determined by blood analysis

2 The supervention of an attack of regular gout simultaneously with subsidence of some one of the ailments named, or an alternation of any one of these with regular gout This is one of the most valuable criteria, which may be regarded as almost conclusive, let the ailment be almost what it may One need not go far to find many remarkable instances

3 The history of previous attacks of regular gout This must be taken in connection with the absence or presence of other causes capable of producing the same ailment

4 The presence of traceable hereditary tendency to gout This has a value similar to the preceding, and must be similarly considered

5 The history of exposure to lead poisoning or other symptoms of plumbism The association of plumbism with gout or saturnine gout as it is called, is one of the most interesting features in the history of gout It is undoubted although the frequency varies greatly in different countries Thus in France, Germany, Ireland and Scotland it is rare, while in England, especially in London, it is common

6 The history of a habit or mode of life which furnishes the conditions of acquired gout

7 The constant presence of a high-colored scanty urine of high specific gravity with a tendency to lateritious sediments and uric acid gravel It does not often happen that gout and gravel coexist More frequently they alternate, the passage of gravel ceasing with the appearance of gout, and *vice versa*, and the supervention of any of the ailments named on an attack of uric acid gravel makes it seems reasonable that such ailment may be of gouty nature

Now it is well known that these phenomena of lateritious sediments and scanty urine are a part of the lithemic state, and the question of the relation of gout to lithemia suggests itself at this point It is also well known that in addition to the characteristics of the urine just mentioned there is a commonness of other symptoms The headache, migraine, depression of spirits, shooting pains, cramps, palpitation and vertigo which characterize gout are a part of the symptomatology of lithemia Nay, more, the same causes which lead to one lead to the other Free living in the broadest sense of the term, including the luxury of habit which is associated with the possession of wealth, is the cause of both, but while a similar train of symptoms exists in both the resemblance stops at the joint affection In lithemia there are no tophaceous deposits If there are, the lithemia has become gout, an event which sometimes comes to pass Why is it then that one man acquires lithemia and another gout under the same mode of living? The answer, it seems to me, must be that the lithemic person is not really gouty, that is, does not possess the inherent tendency which favors the development of gout It is well known that lithemia is a common disease among Americans while the English of all people are most subject to gout The American, as a rule, is not yet gouty On the other hand, the American is rapidly becoming gouty I find the number of gouty cases in my own practice increasing, and they include the grand-children and children of those who have not been gouty, but who were poor and had to work hard I also find among them the children of families where there has been gout, but where it has been kept in abeyance for a generation or more by the same causes

8 The presence of glycosuria in association with gout, or in alternation with it, or in certain members of gouty families is an undoubted fact, and establishes a very close relation between these two conditions I have nothing to do here with the question as to whether such glycosuria should be called true diabetes mellitus or not It may be mentioned, however, in passing that the cardinal symptoms of diabetes, thirst and polyuria are often wanting and that such cases of glycosuria are the easiest of all to control Such glycosuria may alternate with uric acid sediments or may be associated with them, and its presence should always suggest a suspicion of gouty nature to a concurrent or alternating ailment

To a much less degree the presence of chronic interstitial nephritis, which I believe is always sooner or later the fate of the victim of gout, should also receive consideration

10 Finally, here as in so many other cases, therapeutics comes into play as a factor in determining the nature of an ailment Should such be relieved by the typical treatment for a gouty paroxysm, its gouty nature may be regarded as established

Thus it will be seen that there are a number of data which may help us to a correct diagnosis, and that random guesses are not necessary in the majority of cases It is true that a conclusion can not always be arrived at with promptness, and a careful and even prolonged study may be necessary before such conclusion is justified, but I hold that in the vast majority of instances it can be made, and that there is no excuse for the carelessness so often practiced

DISCUSSION

Dr Anders—I can not forbear saying a few words on an interesting paper like Dr Tyson's What I wish particularly to call attention to is the fact that Dr Tyson has distinguished clearly between what has been called since Richardson's time, latent gout or lithemia I am particularly pleased to hear that differentiation made, and I do not think it can be made too often I would go a little further, and say that I do not think that lithemia necessarily leads to gout at all That we have the uric acid state in lithemia is undoubted, and that we have the symptoms that closely resemble gout is undoubted, but that there is any distinct relation between the two in the matter of tendency I have great doubt The diagnosis can, I believe, be made from lithemia without much difficulty

Dr Herrick, of Cleveland—I have enjoyed the paper very much Barber has published a work in which he indulges in very nearly the same view I also rise to the point of the terminology of the disease It should not be regarded as atypical Gout is a term not expressive of any particular phase of trouble What we desire to express is the departure from the normal, and also looking to its source The author to whom I refer speaks of its source as the digestive tract I think we will all agree in the opinion that the disease is one referable to disturbance of the digestive tract, or to excesses of food, or general hygienic conditions of that character, deficiency of exercise, with much indulgence in nitrogenous food and alcoholics It seems to me that we have large hopes in the line of investigation of this class of difficulties, because as the paper says, there are multiple evidences affecting different parts of the body

Dr Anders—I rise to obtain information from Dr Tyson, It was mentioned by him that one of the main factors for diagnosis was the history of heredity, and in that I fully concur I have also observed that gout is markedly hereditary in the families of the poor as well as in those in the opposite condition of life My observation teaches that it is much more hereditary through the female than the male, and in this I am not alone I should like to hear an opinion on this point from one who has seen so much of gout as Dr, Tyson

Dr Tyson—In answer to Dr Anders, I may say that while I am aware of what he says, and agree with the authorities in regard to the heredity of gout through the female, I can not in my whole experience add anything to the knowledge on the subject As to the kinship between rheumatism and gout, I tried to avoid that question, except from this standpoint one of the facts that we have most frequently to contend with is that rheumatism is called gout a great deal more frequently than it should be My idea in forming criteria was partly in order to know whether certain cases are rheumatism or gout The symptoms of acute gout and the symptoms of rheumatism are widely different In chronic gout we have a lack of similarity in certain symptoms, and I feel that enough care is not exercised by physicians in this particular

The Chair—I should like to ask whether there are not certain cases in which it is impossible to make the distinction between rheumatism and gout?

Dr Tyson—There are cases in which it is extremely difficult if not impossible to decide The only point is that we may decide with care more frequently than we ordinarily do

Dr Anders—I should like to ask Dr Tyson whether he considers rheumatism an infectious disease?

Dr Tyson—Yes, I regard acute articular rheumatism as infectious

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THE CONDITION OF THE TWO VENTRICLES WITH REFERENCE TO THE ADMINISTRATION OF DIGITALIS

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7-10, 1895

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The commonly accepted indication for the administration of digitalis is cardiac weakness in its broadest sense More precisely drawn this indication is furnished by weak, rapid, perhaps irregular action of the heart, low pulse tension, a mitral murmur indicating regurgitation or stenosis, dilatation of the right ventricle with or without leakage of tricuspid valves, and dropsy Cardiac dilatation without valvular disease is also considered to indicate digitalis Whatever differences may exist in the cardiac conditions, there is always present relative arterial anemia with venous hyperemia Yet that something else beside mere cardiac weakness exists upon which may depend the usefulness or injury of digitalis is illustrated by the following case

Case 1—Oct 29, 1894, A D, male, age 12, was seen in consultation It was a typical case of mitral insufficiency with lost compensation Hyperdicrotism of the pulse as shown by the sphygmograph, great dilatation of all the cardiac chambers, particularly of the right ventricle, mitral systolic murmur and the classical signs of tricuspid leakage, with greatly enlarged and pulsating liver, ascites and considerable edema of the lower extremities, great pulmonary congestion and moderate hydrothorax in the right pleural cavity Two examinations of the urine subsequently revealed a few granular casts, 1 per cent of urea and slight albumin Diuretin-Knoll and a brisk purge removed anasarca and greatly lessened the ascites within the next two or three days The hyperdicrotism and the manifold signs of pulmonary and venous congestion seemed to plainly indicate cardiac tonics Convallamarin one twenty-fifth of a grain, t i d, was ordered No improvement resulting after two days, the condition on the contrary seeming rather worse, a fresh infusion of digitalis (U S P) was made from English leaves by one of the most reliable druggists of Chicago Of this infusion 1 drachm was given every six hours for three or four days The pulse grew progressively smaller and more hyperdicrotic if that were possible, while the cardiac impulse became more diffused and feeble but not irregular Strophanthin one hundredth of a grain was then ordered and given for about twenty four hours Then came one evening two alarming sinking spells which necessitated the free use of stimulants At this time the enormously dilated right ventricle, could be felt, feebly pulsating in the intercostal spaces to the right of the sternum, and the sounds at this point took on the rhythm of the *bruit de galop* The urine had progressively diminished to about eighteen ounces in the twenty-four hours The patient's condition was truly alarming and we realized the necessity of resorting to urgent measures Strophanthin and digitalis had not only proved useless but apparently injurious, accordingly nitrate of strychnia, one fiftieth of a grain was ordered, subcutaneously every four hours, alternating with one minim of a 1 per cent solution of nitro glycerin every four hours and 2 drachms of whisky three times a day A hydragogue cathartic was also administered The next day to our astonishment the pulse had fallen from 122 to 92 and was perceptibly fuller and less hyperdicrotic The galop rhythm over the right ventricle had disappeared as well as the pulsation in the jugulars Improvement was steady and ten days or two weeks subsequently, 1 drachm of digitalis infusion, together with moderate doses of diuretin Knoll, t i d, was well borne and caused removal of the ascites and edema, the urine increasing to one hundred and twelve ounces per diem The subsequent history of this case does not call for recital here

Here was a case in which all conditions laid down by Bartholow for the administration of foxglove were present, and yet it was manifest that had the digitalis been pushed the patient would have succumbed It can hardly be urged in explanation that the infusion was inert since it was made out of English leaves To what then was the failure of this drug to be attributed? Before attempting to answer this query permit the brief recital of a second case

Case 2—Dr E, male, something over 50 years of age, physician, was seen in consultation last January The chief complaint was of frequent and harassing dry cough, with dyspnea and rapid feeble pulse on slight exertion To make a long story short, suffice it to say, there were found moderate dilatation of the left ventricle, first sound being feeble, second pulmonary sound greatly accented recent pleuritic adhesions at the base of the left lung moderate congestion of liver and kidneys, no râles or distinct physical signs of hypostatic congestion of the lungs Peripheral arteries showed slight thickening, urinalysis by Dr C W Purdy had revealed the existence of chronic insterstitial nephritis of moderate severity The harassing cough and dyspnea were attributed to weakness and dilatation of the left ventricle with consequent pulmonary congestion This case seemed preëminently one indicating digitalis A fresh carefully prepared infusion was ordered therefore and taken in 3 drachm doses, t i d The urine increased in amount, pulmonary congestion diminished and the cough was entirely relieved

Here, then, was a case in which the drug displayed its happiest effects Wherein did the difference in these two cases exist, so far as referred to the administration of digitalis?

If one will search authorities, both in materia medica and therapeutics, as well as in clinical medicine it will be noticed that, with but very few exceptions, no reference is made to the action of digitalis on the right and left ventricle respectively It seems to be taken for granted that its action on these two chambers is the same That this may not be the case was first suggested to me by some statements made by Openchowski in his discussion of Leyden's paper, "*Ueber die Prognose der Herzkrankheiten*"[1] This led me to search out Openchowski's original communication,[2] wherein is published the account of his experiments with digitalis As a preliminary work, he first investigated the effect of vasomotor dilators, as amyl nitrite, on the pulmonary vessels and determined that they were wholly without influence on this system Tension within the pulmonary artery became increased secondarily as a result of lowering of the blood pressure within the aortic system By means of the kymograph he found that small doses of helleborin failed to increase blood pressure within the pulmonary artery or right ventricle In fact, the pressure fell somewhat at the beginning of the experiment He observed further more that if injections of helleborin and digitalis were given and the living heart then excised and immersed in a weak salt solution, the left ventricle continued to beat long after the right had ceased, the reverse of what happens in hearts not poisoned with these agents Moreover, in animals killed by these poisons the left ventricle was found postmortem firmly contracted, while the right was relaxed Upon exposure of the heart in the living animal, previously poisoned by digitalis, the left ventricle was seen to beat more slowly and three or four times as long as the right The left coronary artery was distended with blood and small ecchymoses were found in the myocardium of the left ventricle, whereas the right coronaries not only were not distended but seemed somewhat smaller in volume, and no ecchymoses were ever discovered in the area of distribution of this vessel He explained the production of these ecchymoses by the pressure brought to bear on the turgid vessels by the strongly contracted myocardium The reaction of the coronary arteries to digitalis was similar to the effect observed by Lukianoff, of ligation of these vessels Constriction of the right was followed by turgescence of the left, whereas dilatation of the right did not follow ligature of the left

Openchowski concludes, therefore, that the coronary arteries possess an *eliminating or regulating influence* over the action of digitalis on the right ventricle He thinks this conclusion borne out by clinical experience, that is, by the observation, that in case of disease of the right coronary artery, the effect of digitalis on the right ventricle is injurious He cites in support of this statement a case of mitral stenosis in his own ward in which dyspnea and death followed a few small doses of digitalis and in which the right coronary was found atheromatous after death In referring to his experiments and conclusions in the discussion of Leyden's paper above cited, he mentions also that A Fraenkel has published three cases of mitral stenosis, in which the administration of digitalis was promptly followed by dyspnea and cardiac failure I regret to say I have been unable to get access to this paper of Fraenkel I have, however, carefully perused an address by Leyden,[3] to which Openchowski alludes, and find he says essentially as follows "The beneficial effect of digitalis in cases of mitral disease would seem to point to its chief action being on the right ventricle, but as other experience seems to warrant an opposite conclusion, this matter will have to be left undecided Although this remedy may be indicated and often beneficial in hypertrophy and dilatation of the right ventricle in mitral disease, it is often useless when this condition of the ventricle depends upon chronic bronchitis and emphysema or kypho scoliosis with dyspnea and dropsy So that, as Leyden says, the right ventricle seems to acquire but little energy from digitalis on account perhaps of the small volume of its myocardium "

In this connection may be cited the experiments of M Heger reported in *Bulletin de l'Academie Royale de Medecine de Belgique*, and of which a resume may be found in the *American Journal of Medical Sciences* and the *Therapeutic Gazette*, 1892 This experimenter concluded that the action of digitalis was exerted chiefly on the left ventricle and aortic system, that its effect upon the right ventricle was similar but much less powerful, that it exerted no direct influence upon the pulmonary vessels, but it was capable of relieving stasis within the pulmonic system through its action on the left ventricle He likened this action therefore to a veritable bleeding from the lung It will thus be seen that although Heger considers digitalis to exert more influence upon the right ventricle than does Openchowski, he agrees with the latter in finding no direct action upon the pulmonic system and the effect on the right ventricle subordinate to that on the left

Whether or not Openchowski has proved experimentally all he claims concerning the action of foxglove, there seems to be clinical evidence sufficient in the opinion of such men as Leyden and Fraenkel to render doubtful its utility in all cases of dilatation of the right heart To return now to the case of the lad described above All the recognized indications for digitalis were present and yet it was manifest at the time that this and kindred remedies did harm It is not easy to explain why this was so Disease of the right coronary artery with consequent inability to regulate the drug's action on the myocardium, was not likely in a boy of 12 years There was enlargement of the left ventricle and, so far as I could determine, this enlargement was due to hypertrophy rather than dilatation although this latter condition undoubtedly existed There was an evident disproportion between the strength of the two ventricles in favor of the left, the right being in a state of extreme dilatation Moreover there was free regurgitation through the incompetent mitral valves When digitalis was administered its effect, if we may trust the results of experiments, fell chiefly on the stronger of the two chambers Its contractions were strengthened as could be determined by the pounding impulse against the chest wall, while their rate was but slightly diminished

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[1] Deutsche Med Wochenschr 189

[2] Das verhalten des kleinen kreislaufes gegenueber einigen pharmakologischen Agentien besonders gegen die digitalis gruppe Th von Openchowski zeitjchrift fur klin Med Berlin 1889 XVI, p 201

[3] Uber die Wirkungsweise und die indicatioen der digitalis E Leyden Deutsche Med Wochenschr, Berlin 1881 VII, 345 358

The failure of the drug might be theoretically explained as follows instead of discharging a larger volume of blood into the aortic system, as should have been done, the ventricle may have emptied the larger part of its contents through the wide open mitral orifice, therefore, instead of aspirating the blood out of the over-loaded pulmonic system, the ventricle threw back again the increased volume which had accumulated within it during its somewhat lengthened diastole The dilated and feeble left auricle could not withstand the shock which consequently must have fallen upon the right ventricle Distension of this latter was promoted rather than decreased

However the failure of digitalis in this case may be explained, its effect plainly corroborates the position taken by M Huchard, who declares that excessive dilatation of the heart furnishes a contra-indication to the administration of digitalis He advises first the withdrawal by venesection of from eight to ten ounces of blood, which will remove the over-distension of the organ

In my case a purge was administered in addition to nitro-glycerin and strychnin The result was the accomplishment of just what had failed to be done by the digitalis

In the second case described above, the left ventricle was the chief seat of weakness but the mitral valves were competent Here the drug lengthened diastole, thus permitting a better filling of the ventricle and energized its contractions Blood was aspirated, as it were, out of the lungs into and through the left ventricle into the aortic system Hence the action of digitalis was displayed in its perfection Could anything be more striking than the difference in these two cases?

Whether or not the *modus operandi* in the first case has been properly explained, that is, whether or not the failure of the digitalis can be ascribed to any of the reasons laid down by Openchowski and Heger, or to the theoretical explanation I have given, the case furnishes clinical evidence that digitalis may fail to favorably affect the right ventricle in cases in which it most urgently demands a tonic To my mind it furnishes a strong degree of clinical proof that the administration of this drug and its congeners depends for its indications upon the relative condition of the two ventricles It is not assumed for a moment that these two cases settle this question, it is only hoped that the recital of these cases and the reference to Openchowski's work may open up a line of discussion in this meeting and a path of clinical investigation which will prove of future value

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CARDIAC INSTABILITY DUE TO ACID AUTO-INTOXICATION

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md, May 7-10 1895

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PROFESSOR PHYSICAL DIAGNOSIS IN MEDICAL DEPARTMENT OF THE WESTERN UNIVERSITY OF PENNSYLVANIA AND CONSULTANT IN CHEST DISEASES IN THE SOUTH SIDE HOSPITAL,
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The study of the phenomena occurring in the human body would be attended with vague and impenetrable mystery were it not that we know something of chemic affinities and aversions A great deal of the light that has recently illuminated the medical realm is reflected from the chemic laboratory Chemistry and microscopy have been extending their arms of light in the attitude of a prolonged benediction over our science for at least a decade No methods of investigation have merited and received such universal adoption The only cases that can now be admitted to an audience with the advanced physician without contact with reagents or microscopic scrutiny are hypothetical ones The man who is satisfied with the dictum of his unaided eyes, ears and sense of touch in physical examinations is behind the procession These methods of inquiry introduce us into the arena of vital action, and make plain to our understanding the pathologic processes Much that has hitherto been attributed to diathesis and temperament finds explanation through the medium of study associated with changes that are chemical and molecular Instability in bodily life appears in harmony with the rule that the more complex the molecule the more varied the incidents associated with its activities The somatic functions are known to be subservient to molecular caprice The molecule being dominated by chemic affinities and aversions the demeanor of individual parts and organs is correspondingly inconstant Invariably nature varies This unstable demeanor of the chemic equivalents brings the pathologic line very near to the normal So that, if to day the citadel of life is besieged by the acid forces, to morrow every fort may be dominated by the bases and salts Through the infinite window of the microscope we may now observe the ærobic bacterium dignitary felicitous in his oxygen bath—and anon he will be seen wallowing in the filth and excrement of the anærobic laggard Under one administration the aristocratic white corpuscles dance along the epithelial sidewalks of the arterioles, and under another they are displaced by their ruby democratic constituents All this may obtain because of the change of control taking place between the acids and the alkalies

Many facts have been observed in the recent past, by means of the acids referred to, which demonstrate clearly the presence of chemic forces in the production of otherwise unsolved mysteries, and these can not longer be ignored Numerous insidious, but, nevertheless potent changes, continuously going on within the economy, can be accounted for only by the traffic in acidulous elements There have been repeated and tangible evidences, in my experience, of abnormal heart phenomena that have linked them inseparably to acidulous conditions, as betrayed by lowered alkalescence of the blood, and what is equivalent thereto—hyperacidity of the other bodily fluids Few of us have not had startling and hapless results from unsuspected heart malady which were not accounted for by conditions present, or by any antecedent causes, so far as we could determine After investigating in this realm a number of cases of cardiac instability, I have convinced myself that the mal-behavior and myocardial deterioration are sequelæ to a prolonged acid auto-intoxication

It is almost universally admitted that a large excretion of acids is contemporaneous with an irritable condition of the heart and circulatory apparatus The presence of much acidity no matter how produced, always and persistently coexists with this state of the circulation Theoretical and chemic testimony are corroborative, and investigations have sustained the assumption in nearly every case After prolonged mal-behavior superinduced by acid conditions the heart shows weariness And if theoretical and chemic proofs were wanting, this empirical evidence—that acid conditions may induce nutritive lesions in the myocardium—can not be successfully denied Symptoms of intermittence of impulse rapidly pass from the neurosal into the organic form If the cases continue there follow the results commonly found in similar conditions of the heart from dissimilar causes, viz , dilatation from myocardial changes and inefficiency of the valves from peripheral traction, or in other words, relative or muscular incompetency We have not far to seek for authority to prove that acid impressions extend beyond the nerve influences and when toxic, even in a slight degree, the symptoms appear as involving the regular action and accustomed functionation of organs—especially the heart, for it is well known that all troubles which involve a waste in the residual nerve force entail marked depression that leads to disintegration Doubtless we have all observed the influence of acid conditions brought about by dyspepsia and the coincident tumultuous behavior of the heart We may not have attributed these symptoms to the direct irritation of the acidulous blood upon the heart, yet all have recognized the symptom

Chemic combinations of the blood are known to play a great and important part in the action of the heart, probably in two ways 1, by direct disturbance of the sub endocardial ganglia, and the endocardium in close relation to these ganglia, and, 2, by irritation directly conveyed through the coronary arteries and their branches to those ganglia situated in the muscular tissue The presence of irritating materials in the blood does not specifically limit its pernicious influence, but it prevents proper elaboration and metabolism In addition to this, it crowds out the material most needed for cardiac nourishment, which influence has its first and most natural expression through the trophic nerves and ganglionic cells Although in early stages this condition is curable, if long neglected it is followed by an ingravescent asthenia, from which there is no recovery

So much is now known of the influence of acids upon the heart that we are sure they first exhilarate, then shorten the duration of the systole and subsequently render it less and less powerful until contractions cease altogether and the ventricle remains at rest in diastole When introduced gradually, and their presence protracted, there is a gradual degree of tolerance cultivated which *masks* the results somewhat

Acids influence the entire circulatory apparatus through the nerve supply Vasomotor effects are extremely liable to betray themselves in the periphery by cold extremities and chilliness of the surface Reduced alkalinity causes contraction of all the arterioles in the body and may induce spasm of certain areas Contraction of these vessels is so universal, and the cold surface and extremities so constant, that high tension is to be supposed whenever the degree of acid auto intoxication is reached High pulse tension has been produced at will by several experimenters, by foods, medicines and drugs that were known to influence the acidity or alkalinity of the bodily fluids When high pulse tension and confusion in the nerve supply of the heart coexist, there is a want of adaptation of the central organ to the circulation throughout, and a season of confusion follows, during which there is an increased demand upon the heart for systolic force and a lessened capacity for its achievement In addition to the mal-behavior superinduced in the heart by the ceaseless traffic in blood of lowered alkalescence, it meets with considerable and effective opposition in the spasmodic demeanor of the pulmonary arterioles The heart encounters its most deplorable opposition in the pulmonary apparatus Pulse tension thus influenced in the presence of any renal disability would surely be followed by albuminuria and nephritis If the heart is deprived of the aid of these emunctories the acid tide rises, the cardiac muscle grows weary, and dropsies, nervous accidents, headaches, dyspnea, etc , supervene

The acids taken into the body and others which are the products of chemic changes within the body are constantly passing out of it through the lungs, skin and kidneys Complete oxidation is essential to a perfect balance, but, from the very nature of things this can never be . The organs and tissues act as dyalizers, and, as far as they have the capacity, they set about to neutralize the superfluous acidity If the liver is flooded with acid it may elect to store it up until a more or less remote opportunity for elimination arrives, or it may cause it to assume some other chemic state The spleen has accorded to it similar capacities The kidneys and skin soon divest themselves of its irritating presence The stomach and digestive tube decompose it and pass it along to other parts, with more or less celerity, or expel it as gas, vomit or fermentative stools But the heart is minus such function and is constantly subjected to its irritative influence without means of defense Acidity, which is produced from neutral salts, as frequently occurs after dyalysis, may have immediate contact with the heart and circulation

The acids which are introduced into the system in foods constitute a very tedious list Those which are met with as natural or normal elements in the various processes of nutrition are similarly extended When the digestive tract is converted into a fermenting apparatus other combinations are formed, and their number and variety are vastly augmented When acids appear in the free state in the system they are found in the urine unchanged There is a hypersecretion of hydrochloric acid that may contribute to over acidity, and a similar result obtains in an indirect way by too small a quantity, which will permit fermentation

Much animal food favors acidity on account of its large contribution of acid salts Beer, ale and light wines conduce to acid conditions

It is assumed that the liver stores up uric acid From thence it is conveyed to the kidneys, and there is only a partial excretion and this admits of an overflow by the renal veins causing its appearance, to a small extent, in the general circulation Thus it gains entrance to all the organs It is shown that in cartilages and joint tissues, and also in the bony structures, acid is stored These parts 'being less vascular than most portions of the body, acid deposits are not rapidly removed, even after the blood alkalescence is recovered But the presence of nodosities and deposits of this kind, pre supposes a condition of high acidity in itself The line may extend, in those of exceedingly acid dispositions, beyond the uric acid mark

Special stress is laid by some upon sarcolactic acid This is formed by muscular exertion, and at the same time there is deposited carbonic acid

With all these channels through which the blood may reduce its alkalinity and the body become an acid storehouse, it is not to be wondered at that there is a probability of acid auto-intoxication at any time But if it so happen that excessive formation and defective elimination appear at the same time, the difficulties would become apparent

Defective elimination of the acids may be due to diseased condition of the lungs, skin and kidneys, or possibly to want of physiologic stimulus to the exercise of their functions Acid exaltation follows every temporary suppression of the emunctories, and this is accompanied by decline of blood alkalescence

Very slight impressions made upon an individual by his environments will exert modifying influences The temperature of surroundings deserves consideration A hot room promotes perspiration and diminishes acidity Conversely, cold and damp diminish excretion and raise the acid line By this suppression of the perspiration in those of low alkalescence of the blood there will follow irregular heart action, intermittence of the pulse, increased peripheral resistance and elevated blood tension, accompanied by dimness of vision, vertigo and numbness of the extremities These symptoms may come on insidiously but oftener are very precipitate, as in the presence of all the various means by which the acid tides in the body rise It must of course be known that there is a constant ebb and flow with most if not all However, there are some persons who live just upon the acid line and everything not decidedly alkalin will force them into the acid realm There is a distinct nocturnal acid tide period High acidity during sleep is the rule There is a diurnal tide rise beginning about 3 P M , and continuing until 5 30 or 6 P M These are free from changes incident to ingestion of foods and are, in the major part, of alkalin influence

There is no doubt that the recurrence of these acid tides and continuous exposure to their influence imparts to the tissues an aptitude to take on inflammatory conditions, and incline toward perverseness of nutrition, from which tissue change and fragility may reasonably be expected and do arise

In passing, it may be well to note that the period at which the most lamentable accidents in heart lesions occur, corresponds to the hours when the acid tide is at its highest, viz , during the quiet of the night This is the season when the circulation should be reposeful and yet it is in a great many cases, the time most prolific of cardiac anguish This acid tide rise corresponds to sudden deaths which occur without suspicion of heart malady It also gives a rational' explanation for some others which have been regarded as inscrutable acts of Providence Let us review briefly, a typical case of heart change due to acid auto intoxication, in that most gradual process which would include the entire life of the individual

We will assume that the blood at birth flows purely alkalescent During the first twenty-four hours after birth nothing occurs to disturb this condition, even the alimentary canal is free from fermentative actions and reactions From this time onward, numerous infinitesimal vegetations begin their perilous work in the prima via Bacteria, ptomaines, etc , henceforth continue their merciless crusades The tissues and fluids take on the acidulous character in consequence of the presence of acid in the body And thus the never-ceasing cycle of acid activity is begun

Hydrochloric, lactic, acetic, butyric, sarcolactic and other acids struggle toward the emunctory outlets The excretions are all acid Some extraneous influences ever and anon suppress the functions of the skin and there is a coincident acid rise The heart makes its first misstep—it has been guilty of an intermission Amid the acid ebb and flow, and varying stress incident thereto, the child heart must respond to the unceasing demand for development, so that at the end of two years it may have doubled its bulk, and at each quinquennial thereafter redouble it until it has arrived at the period of bodily maturity. Meanwhile new features and strange processes are inaugurated, including those important changes incident to puberty and adolescence Together with an over consciousness of a generous nerve supply is vouchsafed a vasomotor and circulatory system rendered specially sensitive because of the constancy of the lowered alkalescence of the blood traversing it For a time the circulation is spurred onward and the vital activities are pushed to their zenith point. In such a subject, plethora is extremely liable to come on early The subject finds himself a slave to his cravings for foods and drinks with scarcely enough will to resist the simplest demands In consequence he is prone to supply material for oxidation so freely, by over-feeding, that the contribution of oxygen is inefficient to secure complete combustion Because acid elimination occurs at every point, there is a constant desire for fluids and foods to replace the acid output Acids are freely ingested, and acid foods preferred The emunctories are overworked and lag in their energies About this time in the progress of acid auto intoxication the subject's feelings trace for him a diurnal curve in his bodily acidity, and the heart is very commonly in a tumult.

The constant and protracted irritation of the intrinsic cardiac nerve supply and the vasomotor excitement produce general mal behavior of the circulatory apparatus It appears as a purely nervous phenomenon, but close analysis will give it a different interpretation The respiratory limitations are becoming more and more evident Especially is dyspnea noticeable when the ingestion of acid and gas producing foods combine mechanical obstruction with demands for large oxidation The heart now yields, in these paroxysms, the stethoscopic and physical signs of weakened myocardium, and is on the verge of valvular inefficiency from periphera traction

The prognosis is that some day there will be a cal at the patient's door to which he will not respond, or may be, that surrounded by a social circle his eyes will suddenly lose their luster, his tongue forget its cunning, and he will thrust into their experience the deplorable, foudroyant and overwhelming sequence of cardiac changes due to acid auto intoxication.

The corollary conclusion is that acids should not be employed freely or promiscuously in our foods and drinks. That in most cases they act as irritants to the circulatory apparatus. This fact is especially to be noted in cases of heart weakness or circulatory lesions. The principal demand upon the physician is that of *oversight of the ingesta*. *Numerous cases* will demand the employment of alkalies and antiseptics to overcome acidity and fermentation.

THERAPEUTICS OF THE SENILE HEART.

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In this paper I purpose to dwell exclusively on my method of treating the lesions and functional derangements of the heart in old age.

Naturally, with the term "old age," there is pictured in the mind the infirmities and decrepitude of accumulated years; the coldness of withered finger-tips; the odor of decay accompanying lack of oxygen from the weakened circulation, due to the worn out organ which has labored so faithfully for threescore years and ten.

Yet this is not invariably the condition. Time can only be computed by externals; organically, a man may live, develop, enjoy, suffer, *linger and die* of old age at 45. Circumstances—the most finite of all things—alone determine our length of days, and the period at which we shall begin to deteriorate. Much, very much depends upon our environments, the strain to which this mortal machine has been subjected, and the degree of mental force expended. Given, an ordinarily healthy man's body, his capacity for endurance is determined by habits of life, manner of living, and general trend of thought.

It has been the popular opinion in order that a man may live out his full number of years that the heart must be strong in the beginning. When the human being comes into the world our first solicitude is *for the heart*, it is our key to all phenomena of strength and weakness. From birth throughout his progressive development of childhood, adolescence, middle age and decay, our finger is on the wrist, our ear at the chest.

What is the typical "senile heart" and by what signs may we *recognize it*? A thorough distinction between physiologic and pathologic changes must here be made. Physiologically, the heart in old age seems naturally to resume certain conditions which it lost with childhood, the most common of which may be seen in the quickened pulsations.

The familiar comparison of the heart to the size of the person's fist would be as inappropriate in old age as it is in infancy. While this enlargement as found in old age may generally be classed as a pathologic condition, to which we give the name "hypertrophy," we must remember that it is not an invariable indication of heart-failure. Again, as in the blood vessels in infancy the *coats are thin and fragile*, rendering them susceptible of rupture. In old age we meet with pathologic conditions which bring about very similar results, by loss of elasticity of the coats of vessels; rendering them friable, with consequent liability to rupture.

In the first instance—that of the infant—we have a physiologic condition, *coming, if I may be allowed* to so express myself, from physiologic functioning in an immature organ or system, while in the latter case—that of old age—we meet with tissue that has been worn out or weakened by long use, or improper treatment, "the muscular fibers becoming weary with too much work, or impoverished by scanty nutrition," the debility being brought about by various means. Unnatural demands upon the contractile fibers of the heart bring about the features of cardiac senility, let the age be what it may.

We might theoretically claim that the heart would never cease its pumpings if the motive power supplied by the contractions of its muscular fibers were never lost. But heart tissue, as with all striated tissue, fails after awhile to respond to exorbitant demands, or it may become exhausted from mal nutrition. By this it may be seen that heart failure may arise in itself, on account of impairment of its nervous or muscular elements, or by reason of some mechanical impediment to its workings, or, as Foster tells us, "by *nervous influences proceeding* from the brain, or brought into operation by means of the central nervous system."

In old age the alterations in structure of the walls of the blood vessels are always in evidence.

TREATMENT.

Three factors,—which from their close relation are of equal importance, enter into the treatment of the senile heart, viz., diet, rest, and medicine. Let us consider the

Diet.—With increasing years we generally find a cessation of the ordinary stomach troubles which are so common in early life, and with their disappearance we have consequent increase of appetite, by the indulgence of which the fat producing powers of the tissues are increased and their power becomes weakened thereby; the muscular fibers of the heart suffering from the same fatty degeneration which all muscular tissue undergoes when subjected to like conditions, and as the excess of general nutrition calls for extra exertion on the part of the heart which the weakened fibers are unable to accomplish, the result is dilatation and irritability of the heart substance.

Excessive eating and drinking is fatal in cardiac troubles. We find the person complaining of breathlessness after taking sufficient food and drink to satisfy his voracious appetite, and he is glad to lie down and keep quiet for an hour or two, until the pressure has subsided. Fortunate the person who has led an abstemious life, for the sacrifice will not be so great. The gourmand will tell you that he would forfeit several years from his life rather than relinquish the pleasures of the festive board and adopt the rigid diet his condition demands; for there can be no cardiac disturbance after middle life which does not call for total abstinence from all undue indulgence of physical appetite.

Our investigations should not begin or end with the heart alone; they must include the habits of the individual; the everyday things which go to make up the person's sum of living—mentally as well as physically—for at this period of near approach to absolute knowledge it would be absurd, and indeed a most abject admittance on the part of the physician or physiologist to deny the close relations existing between the mind and body, or to ignore their interdependence upon each other for the perfect health of either, or that the body can be in healthy poise with the mind ill at ease. Objective conditions can never be separated from the subjective; as we wrestle with the problems which deal with our physical man, the mental is equally squaring itself with the vital organism.

The young plant, with its superabundance of vitality will grow and develop almost without sunshine, and with sparsity of soil. It is after the plant has passed maturity, and the sap of vitality runs slowly, and the electrical principle is on the wane, that we are called upon to protect it and give it artificial support. At this period we may look for parasitic growths and unhealthy phenomena. So it is with the living animal organism. While development is going on, the organic powers are, in the untainted body, equal to all physiologic requirements. It is after the fires of life have lost their sparkle and the animal powers are running low, that we may look for organic lesions,—especially of the heart. Energy and life may be considered synonymous terms, and nature never intended that either one should terminate abruptly. We are the *alter ego* of nature, and no natural phenomena begins or ends abruptly.

In the details of our treatment we must be guided by the various symptoms as they present themselves. Stimulants, so generally recommended in the weakened condition of the aged are, as a rule, to be avoided. In edema, all liquids which are not absolutely necessary to quench the thirst of the patient must be withdrawn; and the periods between meals of sufficient length to prevent any encroachment upon active digestion by a fresh relay of food. In cardiac weakness, digestion goes on less rapidly from insufficiency in quality and quantity of the gastric juice, hence the periods between meals must be longer than when in health, and less food should be taken at a time. Let the heartiest meal be at noon, and the lightest at night. Cardiac troubles of themselves often create an abnormal appetite, and this, together with the fact that our most frequent sufferers are those naturally fond of the good things of the table, renders regulation of the diet the most difficult thing for the physician to carry out. Even the specter of sudden death loses its power to frighten the victim of an abnormal growing hunger.

Food.—No matter what the patient's habits may have been, I take from the *menu* all condiments and stimulating foods, all fruits unless they go to form part of the regular meal, also all vegetables with the exception of small quantities of mealy baked potatoes, eaten with cream or milk. Vegetables are composed of more or less water and woody fiber, are bulky, and fill the stomach and bowels with gas; their nutritive qualities do not compensate for the space they occupy.

While we can not (and it would be unwise for us if we could) treat our patients like so many machines, to be fed at will, we must yet insist upon regularity as to the time their meals shall be taken.

Flint says words to the effect that the man who closely watches his digestion, timing every article of food which he puts into his stomach, as it is being acted upon by gastric digestion, watching its progress from thence outward, never escapes being a victim of dyspepsia. From this, as well as other reasons, I hold no argument with my patient as to what he shall eat, or in what manner it shall be prepared, but simply put before him certain rules—verbally or in writing—which he is to follow, and these need not necessarily be so limited as to give him any real cause for complaint.

Probably the total withdrawal of tobacco in any form will cause as much rebellion from our male patients, as any deprivation in the way of food or drink.

Just before meals a teaspoonful of bovinin in a tablespoonful of water is a most excellent adjunct to the food, increasing the flow of gastric juice and obviating flatulency. Raw oysters may be eaten, but should not constitute the meal. Of fish, we have cod, halibut, shad, perch, and pickerel broiled, with butter sparingly. Of fresh meats, sirloin steak well done, with a little butter, chopped beef with one-tenth of fat breakfast bacon, poultry, pigeons and game. All meats should be recently slaughtered, and all fish freshly caught. The cooking should be done expeditiously. With the meat and fish may be eaten such relishes as watercress in its season, dandelion greens, spinach, asparagus and celery, in very small quantities. A small amount of baked sour apple may be eaten with the evening meal with bread and butter and a teaspoonful of pineapple juice as a digester. The honeycomb part of tripe broiled will be an acceptable change to the diet occasionally, if the patient likes it. Bread should form a considerable part of every meal; it must largely take the place of potatoes, and wholly so that of cake, puddings, and all kinds of pastry and confections. The bread should be toasted at night, and should always be so eaten if there is much edema present. The proper way to toast bread is by first putting it in the oven and letting it dry slowly, then brown it quickly over the coals. The bread in every instance should be made of baking powder in preference to yeast.

The daily amount of food eaten should be so regulated that the same quantity will be taken at every meal. The breakfast should be at either 7 or 8 o'clock, the midday meal at 12 or 1, and the evening meal at 6 or 7 o'clock.

Drink.—As to the drink, many physicians say that hot water possesses most salutary properties in heart troubles, but I prefer some weak aromatic tea, as checkerberry, ginger, clove, or other aromatics of like nature; of these the patient never seems to tire. In fact I have generally found it preferred to the cup of washy, weak tea which, after having drank it strong all their life they can never be reconciled to have diluted. They prefer aromatic drinks a thousand times over, as these give them no painful contrasts of past days of freedom and unrestriction.

Let this thing be always borne in mind: the danger lies in eating too much, rather than too little, and also that wines, malt liquors, and distilled spirits are *not* food for the heart, and do not by their use tide over dangerous symptoms.

Clothing.—A few words regarding the clothing and care of the body, and then we will proceed to the medicinal treatment: in summer the patient should wear next his skin, light weight silk underclothing with light weight cotton and wool shirt over it; in winter these should be of medium weight. After many careful observations with different textures and weights this has proved to be the best Dressed like this the patient will seldom get cold, or be cold, or get into a perspiration

The Bath —Only warm baths should be used in cases of senile heart, and the temperature should not be high enough to heat the blood No exact rules as to degree can be given, as the sensitiveness of the individual varies with his condition and the state of the atmosphere Hot sponge bathing and hot shower baths are of great advantage Hot-air baths will be found useful in many cases, but they must be of short duration and given understandingly

Remedies —The great object of the treatment is to increase the muscular power and nutrition of the heart, and give comfort to the nervous system The drugs most potent to accomplish this are digitalis, strophanthus, convallaria, spartine sulphate, adonis vernalis, barium chlorid, nitrate of strychnin, sodii arsenias, glonoine, paraldehyde, chloralamid, chloralose, cimicifuga, collinsonia, cactus grandiflora, prunus virginia, pulsatilla, salicinum, sodii valerianas, tablets of nuclein solution, proto nuclein powder, glycero-phosphate of lime, gaffein, quebracho, kola nut, morphia, atropin, iron, copper arsenite, gold, calomel

The earliest indication that the heart is growing old is a feeling of emptiness and uneasiness in the cardiac region of the chest, radiating around the nipple The heart beats will be feeble, the pulse compressible Regulate the diet and habits of the patient, remove constipation and indigestion Give 30 grains of bicarbonate of soda one hour before meals in four ounces of water or aromatic tea This treatment will also be aided by the following

℞ Tr Cimicifuga	
Tr Apocyni cannab	āā ½ dr
Tr Hydrastis	1 dr
Tr Zingiberis	½ dr
Aqua cinnamoni	10 oz

Mix Give one to three teaspoonfuls *after meals*

If this plan is followed out, this first downward step will be turned backward, and the patient be made comfortable, if he will obey orders If there is indigestion, give 10 grains of peptinzyme before and after meals, with 2 grains of proto nuclein

If the patient comes to us with swelling of the feet, when exertion, though light, brings on dyspnea, then we must give the patient *rest*, which must be *absolute*, for a few days or even weeks Carefully regulate his diet, and give the following

℞ Tr digitalis	2 dr
Fluid ext berberis aq	1 dr
Tr cimicifuga	1 dr
Tr rhamni pursh	½ dr
Tr apocyni cannab	1 dr
Aqua gaultharia	5 dr
Glycerina	āā 5 dr

Mix Give one to two *teaspoonfuls* after meals, in wineglass of aromatic tea Three grains of the iodid of strontium may be given in connection with the above Continue this for one week or ten days, and then give the following

℞ Strychnin nitras	1 gr
Acidi nitrici	2 drops
Tr ferri chloridi	5 drops
Aqua	4 oz

Mix Take one teaspoonful before meals, in a wineglass of water

℞ Fluid ext pruni virgi	½ oz

Take from ten to fifteen drops after meals, in tablespoonful of water, and at the same time, five drops of liq sodii arsenitis

In attacks of angina, nitro glycerin is of great benefit, one one-hundredth grain tablet three or four times a day will quickly relieve the pain In some cases the patient will require an active cholagogue purge, the following is an ideal one

℞ Podophyllin, res	4 gr
Ext rhamni pursh	10 gr
Euonymi, res	20 gr
Irisin, res	5 gr
Ext colocynth, comp	10 gr
Ext rhamni pursh	10 gr

Mix Make twenty pills, take from one to three pills after supper, and repeat as required

We often have to use narcotics to quiet pain and induce sleep, that

> "Knits up the ravelled sleeve of care"

The following is a good model

℞ Morphin sulph	20 gr
Atropin sulph	1 gr
Caffein	1 dr
Sodii benzoat	2 dr

Mix Divide into one hundred and twenty powders Give one powder once or twice during the twenty-four hours, either per mouth, rectum or hypodermically

When there is considerable ascites, forming part of the general dropsy, it is best to aspirate, as it saves a good deal of time, most of the serum is gotten rid of, and then the remedies will act *more kindly* I usually aspirate from the scrotum, and not wait for the abdomen to fill Every ounce of serum can be drawn from the limbs in this way In women, aspirate from the labia

If at any time the patient should have severe dyspnea, give the fluid extract of quebracho, in doses of fifteen to thirty drops, every three or four hours in water *I have found it invaluable*

In cases of sub-acute rheumatism the following will give quick relief

℞ Fluid ext cimicifuga	āā 5 dr
" " pilocarpi	
" " manaca	
" " piscidia	

Mix Give twenty drops every three hours, in a tablespoonful of water

If the parts are painful, the following will give quick relief

℞ Ichthyol	1 oz
Aqua	8 oz

Mix, and apply to the parts every four hours, *cover with* cotton

In cases of senile heart, when we find the patient loaded down with fat, a lax abdomen and *distended* intestines, the following will give good results

℞ Rubidii iodidi	2 dr
Fl ext adonis vernalis	1 dr
" rhamni pursh	āā 1½ dr
" euonymi atrop	
" leptandra	
Elix simp glycerini	āā 2 oz

Mix Take one half teaspoonful *before meals*, and one hour after, in a wineglass of water

The whole body should be well rubbed with the following ointment take of equal parts of beef marrow and leaf lard, recently prepared, eight *ounces*, oil cinnamoni, oil eucalypti, and creasoti, of each one *drachm* Mix and use once a day, special attention being given to the abdomen, *for at least fifteen* minutes each time

If pneumonia supervene, the following can be given

℞ Calcii chloridi	4 dr
Strychnia nitras	½ gr
Tr pulsatilla	½ dr
Infusi serpentaria	8 oz

Mix Give one teaspoonful every two hours, in wineglass of spearmint tea

When we have a gouty condition existing with senile heart, I have given the following with especial benefit

℞	Auri et sodii chlo	16 gr
	Sodii arsenias	15 gr
	Sodii bromid	1 oz
	Aqua	8 oz
	Syr simp	8 oz

Mix Give from ten to thirty drops after meals, in wineglass of water In some cases one to two drops every two hours will do better

The following is well adapted for nervous fluttering about the heart in nervous women

℞	Fl ext pulsatilla	
	" caulophylli	
	" cactus grand	āā 1 dr
	Aqua camphora	4 oz

Mix Give one teaspoonful every three hours

For the "tobacco heart," in elderly people

Strychnin arsenate	1 gr
Quinin arsenate	2 gr
Salicin	1 dr

Mix Make sixty powders Give one powder after meals, or half a powder every three hours for six doses, dry on the tongue This not only tones up the heart, but destroys the appetite for tobacco

DISCUSSION ON PAPERS OF DRS BABCOCK, PATTEE AND ENGLISH

Dr Rochester—As to Dr Babcock's paper, there are one or two points upon which I wish to take issue with him in regard to the indications for digitalis He said that in those cases he reported there were all the indications for digitalis present, and then he states there was unequal action of the two ventricles, that the action of the left was greater than the action of the right If we find the left ventricle acting strongly, it seems to me that it is an absolute contra indication to the use of digitalis The subject under discussion is the matter of the use of digitalis in certain conditions of the two ventricles, and his conclusion in that case, I think, was absolutely contrary to his own reasoning

In regard to Dr English's paper, as to acid intoxications, there is no question in the mind of the profession, I think, that we have numerous acids produced in the body, and have acid auto-intoxication creating cardiac instability, but to attribute to that cause the sudden deaths from cardiac instability is pushing the matter too far There are a great many things which enter into the production of a weak heart, we must take into consideration that we have toxemias of various kinds in the body when we have that condition he described, in which the excretions showed great acidity We must not consider simply the acid alone of the toxemias present The careful investigation of the excretions, as to amount and chemic constituents, is of more importance than the simple acidity or non-acidity, or the lessened alkalinity of the blood itself

In regard to Dr Pattee's paper, it seems to me that the Doctor has gone wild over the matter of medication, giving us all the possible drugs that could be used in any way in connection with the heart It seems to me that the present trend of medical thought is to simplify our treatment, and find out the actual physiologic action of drugs before giving them He says that stimulants are contra-indicated in almost all cases It would seem that this is not true, as we find in the condition of age the worn-out tissues which need stimulation if stimulation is ever needed at all, and these would appear to be the very cases in which whisky should be of use It is a mistake to consider the heart without relation to the rest of the body We must consider the heart in relation particularly to the capillary circulation, and in that matter I think we find the key to our treatment of all these senile hearts In the capillary circulation if we find the vessels hard and thick as they generally become in advanced years, then before giving any medicine whatever to increase the force of the heart's action, we must relieve as far as possible this contraction of the capillaries, and that can be done by various physiologic methods of procedure, by baths and by properly given friction That, I think, is of more importance than the administration of drugs to cause sweating,—such as the pilocarpin—or the use of cholagogue cathartics, etc The main thing it seems to me, in old people is to keep careful watch of the capillary circulation Then if we find that there is marked deficient action of the heart, we must pay attention to the nervous system, and in my opinion there is no drug that comes up to opium in that matter, in controlling the action of the heart and enabling the system to go on as it properly should

Dr H B Sears, of Wisconsin—I think if we could speak of conditions perhaps more than of remedies, we should be more likely to agree, as well as be more logical in our use of remedies It seems to me that the two cases related in Dr Babcock's paper cover the case very well, and illustrate the use of heart tonics or stimulants In the case in which he had the bad effect from the use of digitalis he says that he treated an enlarged liver, with the accompanying condition of what we might call venous stasis or peripheral edema I believe it is conceded to-day that heart tonics, of which perhaps digitalis may be the type, should not be given when there exists edema or ascites until the edema or ascites is first relieved by aspiration, when the heart tonics will be effectual Tonics are also contra-indicated in high temperature I think these points are very important It is not that the heart tonic is at fault, but the conditions are unfavorable for its absorption and favorable working If we have the blood vessels already pressed upon by transudation, we can not expect that the heart will recover under this unfavorable condition If by aspiration, or perhaps by the old-fashioned bleeding—which is, however, unnecessary —we can relieve this transudation then we can, by proper measures, bring about a normal condition

Dr Pattee said he would aspirate the scrotum or the labia until the edema left It seems to me that if he would give purgatives and then give his heart tonics, strychnia included, he would accomplish all that is desired

Dr Chapman, of Louisville—I was deeply interested in the paper read by Dr English, and am also glad to find that the trend of the papers has been toward a study of auto intoxication as a cause of disease, for it seems to me that scientific research just along this particular line will, in the near future, explain to us a number of conditions, particularly as to the etiology of disease, in which the microscope has entirely failed Dr English, in speaking of the instability of the heart and its relation to an acid auto intoxication has mentioned facts in which I heartily concur At the same time it seems to me that if he had carried his investigations a little further he might have been able to make out the particular acid and the particular disease of the heart For instance, within the last few months I have been making some investigations as to the chemic change in the stomach as the cause of disease, particularly rheumatism Out of twenty five or thirty cases that I have examined carefully, in no instance have I failed to find lactic acid present in the stomach Lactic acid, it has been known or believed for years, is the cause of rheumatism, and I am satisfied that that assertion is sufficiently established in the minds of those present here Accepting that as a truth, I have taken twenty five or thirty cases of rheumatism, both muscular and articular, and examined the contents of the stomach to see what acid we would find there, or whether we would in all instances find acid present I have conducted the examinations in this way we know that lactic acid is present while food is being digested, that is for one or two or three hours after the meal has been taken It is then normally in the stomach But Boaz and Ewald have proved that lactic acid is abnormally present after the third or fourth hour I have proved by reagents, by the ferric chlorid, that lactic acid is present in these cases of rheumatism, and this leads me to the point I wish to make, that we see in all cases of rheumatism, or nearly all cases, valvular disease of the heart or endocarditis, then if lactic acid is the cause of rheumatism, this is the agent in rheumatism which causes the heart lesions

Dr Stockton—I do not feel that I am called upon to enter into a discussion on this subject, but I can not allow the occasion to pass without protesting against the theory that cardiac diseases are commonly caused by the acid of the blood Nor can I refrain from criticising the last speaker in his statement that lactic acid is found or that it has anything to do with the matter whatever Where it does occur in very large amount you do not find heart disease nor do you find rheumatism

Dr Webster of Chicago—I want to call attention to the points which Dr English makes as to the danger of acids, and to the fact that he draws no distinction between vegetable acids and mineral acids He would lead us to infer that if we give vegetable acids these increase the acid, or rather diminish the alkalescence of the blood, because we never have an acid reaction in the blood in health If there is any one fact that seems well established, it is that the giving of vegetable acids increases the alkalescence of the blood There is another important point, and that is the elimination of carbon dioxid Oxygen is necessary in the carrying on of life processes in the body, but it is just as necessary that the waste tissues should be eliminated We know that carbon dioxid is carried away from the tissues where it is produced, to the lungs where it is eliminated as a bicarbonate of soda I must congratulate Dr English on calling attention to this important point, and to the part which acids play in this condition and, especially, one point that he emphasized, probably the keynote to the whole question—the fact that the blood pressure is increased by the presence of acids in the circulatory system, and the increase of peripheral resistance increases the work of the heart Anything that increases the work of the heart must lead either to its hypertrophy or if that work be thrust upon it suddenly it must lead to its fatigue I do not believe that death is ever caused by auto intoxication in an otherwise healthy heart, and I contend that there is no condition in which there is an acid state of the blood during health

Dr English—I thank you for the reception which you have given my paper I would simply respond to the first speaker, that he must not imagine from the fact that I have given my views on the acidulous conditions that these are the only views that I have with regard to heart disease Of course it may seem, when defending a cause of that kind, that this is my peculiar view and my only one I feel that there are a great many things in which the paper is not complete, it having been reduced from one more elaborate If I have called the attention of some of the other minds in this Association to the need of investigation in this realm, I think I have done all that I could have hoped

LECTURES

LECTURES ON INTRACRANIAL SURGERY

XI —THE SURGICAL TREATMENT OF INSANITY

BY EMORY LANPHEAR, M D., Ph.D

ST LOUIS, MO

(c) Insanity due to softening That portion of the cortical substance most prone to embolic and thrombotic softening is that which is supplied by the parieto sphenoidal branch of the middle cerebral, or Sylvian artery, the left being much more frequently affected than the right That softening of the brain —even of quite limited extent—often gives rise to insanity has for many years been a well established fact, but the proposition to trephine in such cases is, so far as I know, wholly original with me, as I can nowhere find record of cases similar to my own By the term "softening," I do not mean *cerebral abscess*—all surgeons would trephine for abscess if its location could be determined—nor to that condition formerly called "red softening," which is in reality only the initial stage of a suppurative inflammation and which if not arrested leads to destruction of the nerve fibers and cells by pyogenic microorganisms, but to that condition that follows cerebral hemorrhage, embolism of some vessel beyond the circle of Willis, or sometimes thrombosis in like region We know that soon after the injury takes place the process of softening begins and gradually advances until a group of convolutions or even a whole hemisphere becomes but a creamy mass, containing degenerated nerve cells, masses of dark granules (blood vessels in a state of fatty degeneration), remains of connective tissue, etc , but no pus , the boundaries of such areas of softening are often quite distinct from the healthy brain tissue surrounding, which has led to the erroneous opinion that the degenerated substance becomes "encysted," this is particularly true of softening following cerebral hemorrhage If the skull be opened in such cases the brain and its membranes will often look swollen and feel as if there were a sac full of fluid beneath, the puncture allows the escape of the softened mass, semi fluid in consistence, of purulent appearance, but in reality not pus Here, one would naturally think, is a complete hemiplegia, a total aphasia, a hemianoposia, a one sided deafness or other manifestation of an obliterative process in the brain, with softening as the pathologic condition—a state of hopelessness that should debar even the most venturesome surgeon Perhaps so, if there be evidences of destruction of a whole hemisphere, but frequently the focus of softening is but a limited one, as in embolism of that branch of the middle cerebral which supplies the arm center and the speech area This particular region is selected as one for illustration because it is not infrequently affected by embolic softening and because its contiguity to the frontal gyri often causes symptoms of mental irritation, though we often see patients affected by hemiplegia without aphasia, due to either embolism, hemorrhage or thrombosis, presenting evidences of profound irritation or disturbance in those convolutions which preside over the intellect, long after the subsidence of immediate pressure symptoms

Every physician can call to mind, patients whose characteristics were irritability, irascibility, fits of mental aberration and even homicidal and suicidal impulses, of whom he has said to friends "You must bear with this man as well as you can as he is not responsible—he has softening of the brain and nothing can be done for him" In former years I made this assertion many times, but now I am not so positive, in fact, I am convinced that many such cases are amenable to surgical treatment, not, indeed, as an operation to be made with the object of improving a paralysis or other manifestation of de struction of the cortex or communicating fibers, but of clearing out a quantity of irritating material and substituting one (like the blood serum or cerebrospinal fluid) which will within a brief period fill the cavity and will not give rise to symptoms of irritation

The technique I have followed is this the scalp having been properly cleaned and protected, a large flap of scalp and periosteum is turned back and a button removed at the point indicated by cerebral localization or otherwise When the dura is exposed it is palpated, if indications of softening are not now present, the bone can be replaced and the scalp closed—no harm being done If there be sufficient evidence of softening, another button is removed and the two openings joined, or the trephine hole is enlarged with forceps, when large enough to allow the underlying structures to be manipulated with ease the dura is cut with a good flap Inspection proving the correctness of the diagnosis, a free incision is made through the pia and the softened brain tissue allowed to pour out The cavity is irrigated with hot salt solution (temperature about 105 degrees F) and left full of the same while the dura is closed with fine interrupted catgut stitches and the scalp sewed with a continuous catgut suture No drainage is used and a firm compress of bichlorid gauze is applied with proper dressings That such an operation is wholly practicable and may lead to improvement I have positively demonstrated As an illustration the following case is cited

Insanity from Softening of the Brain—Operation—Complete

Relief —A M , of Derby, Kan , age 56 , had cerebral hemorrhage six years before my examination, involving speech *center and area At first he was completely hemiplegic* and totally unconscious After a few days consciousness gradually returned and later on the use of the leg was restored At the time of examination the following note was made "Aphasia is total, *i e* , practically so, his vocabulary being limited to 'You do, you do,' for yes, or acquiescence, and 'Um um,' for no, or negation Agraphia is total, but he recognizes some written or printed words which have been read and explained to him many times His memory is fully as good as before the "stroke," but his intellect appears somewhat affected Paralysis of right arm is complete, but a fair use of leg has been acquired At times he is very irritable and has repeatedly threatened the life of his wife , for this, subsequently, he indicates that he is very penitent, and intimates that the impulse is beyond his control , in his sane moments he answers yes, very vigorously when asked if he regrets his mental irritability and moral irresponsibility , he complains of a band-like sensation around his head and often suffers intensely from headaches " Upon examination I made a diagnosis of softening of the brain involving the region of the lower part of the Rolandic fissure and possibly also a part of the spheno temporal lobe as well as some of the parietal convolutions I explained to him and to his doctors that no one beside myself had ever made the proposal to operate for cerebral softening, pure and simple, and that it was purely experimental, as well as not wholly without danger The reply was that any danger would be encountered for a bare possibility of even incomplete relief from the fearful maddening sensations in the head

Under such circumstances on June 27, 1892, assisted by Drs J F Binnie and J D Griffith, I removed a considerable portion of the skull over the affected region On turning back the dura there was disclosed a cloudy infiltrate in the pia and an apparent fluidity beneath Taking sharp-pointed scissors I *plunged them into the middle of what should have* been the third frontal convolution and withdrew them, open There followed a gush of broken down brain and other *débris* of creamy consistency to the amount of fully a pint , but no pus The large cavity was carefully washed out with sterilized salt solution (*no antiseptic solution ever being permissible inside the skull*, except possibly in cases of abscesses) left filled as nearly full as possible with the fluid, the dura was replaced and stitched, and the scalp sewed into place without drainage, after careful arrest of all bleeding, and a firm compress of bichlorid gauze applied The operation lasted but a few minutes, and the patient was put to bed without shock He slept better that night than for months, awakening the next morning with the smiling indication that his head was better There was a rise in his temperature to 99¾ on the second day when he insisted upon sitting up in a rocking chair On the third day he was up, around the halls of the hospital with a profoundly cheerful "You do, you do," in reply to inquiries if he felt better

The improvement was not temporary, as was predicted by some who heard for the first time my proposition that such cases can be relieved by operation He was discharged on the fourteenth day in excellent condition mentally and physically

To this day he has had no recurrence of the bad symptoms, is passing an enjoyable life in traveling, and has sent me, I believe, six other cases for trephining, and with his grateful "You do, you do" is spreading the good news that for such hitherto helpless cases there is a possibility of relief in surgical interference There is no improvement in his speech nor in the use of his arm, but he thinks he has far better control of the leg than before the operation

(*f*) Insanity of chronic hydrocephalus Chronic over-distension of the ventricles, as well as subarachnoidean effusion, may end in terminal dementia I have heard of only one operation for hydrocephalic insanity, and the result I have been unable to ascertain It is justifiable

3 *Epileptic Insanity* —It is a natural and correct inference that so serious a disease as epilepsy would often lead to the development of insanity Bucknil and Tuke calculate that epileptic insanity constitutes about 6 per cent of all cases admitted to asylums , this does not include that very large class of cases in which epilepsy exists merely as a complication of the mental disease In view of the number of cases, and the frequency of operations for simple epilepsy, I am surprised that I can not find any published reports of trephining for epileptic insanity There certainly must have been many such operations already made I know of two cases in this city, in the practice of Dr A B Shaw, the history of neither having been published The points of interest are these

Epileptic Insanity—Operation—Some Improvement —Mr ——, who had been epileptic for many years, was suddenly seized with furor epilepticus He was violently insane and at the end of ten days manifested *no sign of improvement* He was therefore trephined upon both sides of the head The skull was very *thick and eburnated—fully one third of an* inch and like ivory, but there was no increased vascularity of the diploe as is so often met in general paresis An opening, 2½ by 2½ inches, was made upon either side and the dura freely opened It was exceedingly thick No abnormal condition of the cortex of the motor region was discoverable Upon his recovery from the anesthetic it was found that the insanity was gone He had no recollection of any event which transpired during the ten days of his maniacal state The epilepsy vastly improved for a long time and he was in good mental condition, but the openings finally became filled with firm, unyielding, fibrous tissue, after which the epilepsy gradually grew worse, then epileptic insanity developed and he was sent to the insane asylum where he now is , a second operation being refused

Epileptic Insanity—Operation—Change of Form of Insanity the only Result —Miss ——, age 32 years, developed epilepsy at puberty The general health became impaired, the epileptic paroxysms assumed a very severe character and at about 30 led to the development of chronic delusional insanity The same operation was performed as in the case just mentioned She seemed much better for a time and the epilepsy was entirely relieved for eight months Then the convulsions became bad again, delusions once more were established with marked prominence and the insanity was fully as bad, if not worse, than before the operation The only change which occurred was in the form of the insanity—she had a severe grade of melancholia taking the place of simple delusional insanity

The effect of the operation in this case was much like that of my second illustration of the traumatic variety, from dementia to melancholia While these cases do not count for much in the way of encouragement, I still feel like advising experimental trephining in every case of epileptic insanity where there is any localizing symptom , and I am not sure but Shaw is right in making double windows in the skull over the motor region in cases presenting no localizing signs

4 *General Paresis* —In general paralysis of the insane we have far more numerous reports than in any other form of mental disease It is in the first stage of this malady, if at all, that I shall look for beneficial results, for here we have a mental disease (so called) which is dependent upon gross lesion, generally slight in extent at the outset According to Maudesley, morbid adhesions of inflammatory origin, slowly spreading, between the cortex and its investing membranes, constitute the most characteristic lesions, being absent in only a small percentage of cases If then, by surgical means, we can arrest the spread of the trouble while it still involves that part of the brain which presides over the higher mental powers and ethical feelings—the centers which first fail almost uniformly—we may prevent implication of the motor, sensory, trophic and vasomotor regions Upon this argument numerous operations have been made and excellent results have been recorded, notwithstanding the teaching we have been wont to accept, viz , that the pathologic changes are

not purely cortical, superficial, but involve cells, vessels, fibers, neuroglia, and the ependyma of the ventricles, and that the degenerative process sometimes begins in the spinal cord But we are compelled to accept clinical results regardless of our ideas of pathology—"conditions, not theories, confront us"

Claye Shaw has reported two cases of unquestioned general paralysis trephined at the Bamstead Asylum, in which the adhesions were broken up, iodoform dusted in freely and great improvement obtained Another case was operated on at the Brockwood Asylum with the result that "there was marked relief of several prominent symptoms" (*British Medical Journal*, September, 1891) Rey records a case (*Le Progrès Medicale*, Aug 15, 1891), which was able to return home in six weeks and afterward remained calm and quiet instead of the opposite conditions, which were pronounced prior to operation The subsequent history is unknown

One operation for general paresis was made by Wagner at the Utica Asylum Much fluid escaped from the sub arachnoidean space, estimated at six ounces, and a number of adhesions were relieved There was great improvement but the patient died in six weeks The autopsy showed pachymeningitis interna chronica hemorrhagica with cerebral atrophy Quite a large number of other operations have been recently published—nearly all with encouraging results

5 *Syphilitic Insanity* —This form of insanity may depend upon minute structural changes in the brain and meninges which can not, says Fournier, be distinguished from the lesions of diffuse, interstitial meningo encephalitis, but much more often it is caused by gumma or gummatous infiltration (the disseminated miliary nodules of Engelstadt and Lancereaux) Gummata are most frequently situated in the dura and subarachnoidean space as 1, somewhat hard, dry, white circumscribed tumors, and 2, grayish-red, moist, gelatinous, semi transparent masses Manifestly some of them can be readily removed by the knife, and as internal medication only palliates—rarely cures—such cases are typically of a surgical character I have already detailed one successful operation for syphilitic intracranial growth characterized by insane symptoms There can be no doubt about the propriety of operation whenever there is any certainty as to the location of the irritating deposit And even if no marked local disease be found there may be decided improvement following operation—though just *why* the change occurs I can not explain Through the kindness of Dr William Fuller, of Grand Rapids, Mich , I am enabled to present this history of such a case

Syphilitic Insanity—Operation—Improvement but not Cure—No Lesion Found —The patient was a man of 30 years of age, who was insane for seven years, the disease was unquestionably of syphilitic origin, but he had been flooded with mercury and iodid of potassium without benefit The most violent epileptic seizures were of frequent occurrence His mental condition was one of almost total wreck, his mental reflexes were nearly perfect but disconnected—he could entertain but one idea at a time For example when his mother visited him after a separation of three months he greeted her as if he had parted from her but an hour before, while talking with her the dinner bell rang, when he at once left her and walked to his meal and did not remember to return He was never vicious, nor showed any evidence of interest in surrounding things or persons—he was perfectly apathetic Examination showed marked asymmetry of the head, the right parietal eminence looked like a saucer and careful investigation showed this want of symmetry to be acquired, not congenital From this aspect it was presumed that some motor disturbance would be found upon the left side of the body but this was not the case The right side of the body was somewhat atrophied, and much weakened in its muscular contractility, the epileptic seizures were at first confined to the right side, and after they developed into general convulsive epilepsy the spasms invariably began in the right side The right pupil was permanently dilated but was still sensitive to light There was some incoordination Although the external indications pointed to trouble upon the right side of the head, the localizing symptoms positively indicated the left hemisphere as the seat of irritation and at the operation these, instead of the local signs were followed The greater portion of the left parietal bone was removed, the bone varied greatly in thickness at various points, being more than a half inch thick at the Rolandic region The dura was not affected and the subjacent brain appeared normal There was considerable enlargement of the Pacchionian bodies

There was little shock from the chloroform or operation Two hours afterward he awakened and asked "Has my wife gone home?' a moment later 'Has mother gone, too?" and a little later "Did they go together?"—three questions connected with each other, in logical sequence, something unknown in the history of his disease He improved rapidly, so that in two weeks he went all about the city with his nurse, paying carfare correctly, obtaining proper transfers, making purchases, introducing friends to each other, etc The change was marked and gratifying Several weeks after the operation he again became subject to epilepsy—having many severe convulsions close together, he finally sank into a comatose condition and appeared to be dying Dr Fuller was called and found the patient profoundly unconscious pulse almost imperceptible, the respirations about eight to the minute, the face cyanotic and the general appearance that of a man *in articulo mortis* The opening in the skull was greatly elevated and tense beneath the scalp instead of being depressed and pulsating He therefore thrust a bistoury through the scalp and dura just as one would lance an abscess Several ounces of serum escaped and two or three ounces of blood from a cut vessel in the meninges This was caught and an antiseptic dressing applied The cyanosis and other bad symptoms immediately subsided and in a short time the patient was up as if nothing had occurred He soon after developed suicidal impulses and was sent back to the Michigan Asylum, where he died nine months after the operation in the post epileptic stage of a severe convulsion No autopsy was permitted as the asylum physician characterized the operation as a gross outrage, in spite of the marked improvement!

Had an operation been performed upon the right side of the head, subsequent to the one upon the left, the probabilities are that cure might have resulted It is certain that operative treatment is the only one which promises much in syphilitic insanities As I said in speaking of intracranial gummy tumors, we are puzzled at the inefficacy of internal medication, the symptoms occasionally yield temporarily to our remedies but return again and again The conclusion at which I have arrived from a study of quite a large number of cases of cerebral syphilis is similar to that of Mr Horsley, viz, the only hope of permanent relief lies in removal of the affected area whenever it is accessible, nor is it absolutely necessary that any lesion be found in order to effect a cure, as sometimes the insanity yields to simple craniotomy Whether or not such a result is due to the curative action of the operation *per se*, as claimed by J William White, matters little so long as the mental trouble is cured

6 *Paranoia* —Burckhardt has detailed six cases of this form of insanity with marked hallucinations, which he subjected to operative treatment In the two cases he aimed to intersect the paths of association, which he thinks transmits the pathologic impressions coming from sensory parts and certain ideogenic areas of the brain, a portion of the frontal and parietal lobes, before and behind the ascending convolutions were removed with very satisfactory results in one case,

the other dying from convulsions on the sixth day In three other cases the hallucinations were more or less acute and in these the operator attacked the centers through whose injury sensory and motor aphasia are produced, and removed a part of the first temporal and the third frontal convolutions on the left side, which appeared diseased, and with satisfactory results In one patient, ablation of portions of the right superior parietal convolution and the supramarginal gyrus caused paralysis of the left arm for seven weeks and transitory paresis of the left leg Recovery from the paranoia was perfect From these experiments it seems possible that with additional experience and a minute study of the pathologic changes seen in the brain, the knife may be the means of restoring to reason many cases now considered incurable

RULES FOR TREPHINING FOR INSANITY

1 Every depressed fracture of the skull should be subjected to operation at the time of accident, regardless of the amount of depression and irrespective of pressure symptoms

2 Every case of prolonged unconsciousness following a blow in the frontal region should be trephined for exploratory purposes, upon both sides if necessary

3 The skull should be opened in all cases of insanity dependent upon trauma, at the earliest possible moment after development of the mental symptoms

4 Operation is justifiable in every case of serious suspicion of tumor, abscess or softening of the frontal (or any other accessible) region

5 Operation is advisable in every insanity following cerebral or meningeal hemorrhage in which localization is possible, the clot accessible and the mental trouble of recent development

6 Every case of insanity developing in the history of otitis media suppurativa deserves immediate exposure of the favorite site of cerebral abscess

7 Trephining for the purpose of breaking up adhesions of an old meningitis has been successfully practiced though it is not to be strongly advised

8 Establishment of permanent drainage beneath the scalp is permissible in the beginning of a terminal dementia succeeding chronic hydrocephalus

9 Operation for epileptic insanity is advisable whenever there are symptoms pointing to a focal lesion

10 Experimental trephining in the early stage of general paralysis of the insane is considered worthy of further trial

11 Operation should be done for even a suspicion of the existence of a gummy deposit in the bone or meninges

12 The formation of fenestræ in the skull is permissible whenever there is evidence of intracranial pressure, even of unknown origin

SOCIETY PROCEEDINGS

Association of Military Surgeons of the United States

[Special correspondence of the JOURNAL]

Fifth Annual Session, at Buffalo, N Y, May 20–23, 1895

The meeting this year was in every respect an unqualified success to which the lavish entertainments of the citizens of Buffalo greatly contributed In a professional paper like the JOURNAL, these should be passed over with a few words, but at least an enumeration of them will be permitted as a slight commemoration of the successful efforts on the part of Buffalo

A *conversazione* of the Microscopical Society, a similar entertainment at the Iroquois Hotel, a magnificent full dress reception at the Buffalo Club, a carriage drive to Fort Porter and other points of interest in the city, a promenade concert, review and parade, tendered by the Colonel and officers of the 65th Regiment N G , N Y , and a well planned excursion to Niagara Falls with a visit to the electric power plant, composed the official program of festivities, which were interlarded with private dinner parties and luncheons, notably those given by Professor Park and Dr Chauncey Pelton Smith

These entertainments induced a closer acquaintance among the medical officers present and aided greatly in the harmony of the meeting The sessions were opened at the Star Theater with a prayer by Rev William C Wilber, followed by Hon Herman T Rogers, who welcomed the visiting surgeons, on behalf of Governor Morton to the State of New York He was succeeded by Hon Edgar B Jewett, the Mayor of Buffalo, who spoke for the city of Buffalo, and then by Prof Roswell Park, President of the State Medical Association The latter gave a very interesting historica review of the status of the military surgeon Col Geo C Fox then welcomed the Association on the part of the National Guard, and eulogized the efficiency and progressive spirit of its surgeons Announcements were then made on behalf of the Buffalo Committee of Arrangements by Major Albert H Briggs, Chairman (It may be proper at this stage of my report to speak of the very successful administrative labor of Dr Briggs as the elaborate program of the committee did not fail to connect in every detail)

General George M Sternberg, Surgeon-General U S Army and President of the Association, then delivered the annua address While giving credit to the superior facilities of civilian surgeons for gathering experience, he laid stress upon the necessity of special training for the military service If more of this had existed at the outset of the War of the Rebellion a great number of lives, sacrificed not only through wounds, but by disease, might have been spared He illustrated from his experience at Bull Run, what unfortunate conditions resulted from the want of organization Very little surgery can be done at the fighting line, and well-trained corps of sanitary soldiers will in future war greatly facilitate the immediate care of the wounded

He then enumerated the changes which will take place in military surgery owing to improvements in firearms, smal arms as well as artillery, and gave a description of the Hebler tubular bullet, the very latest projectile devised to still more reduce the weight of ammunition and increase th flatness of the trajectory

The address was replete with practical instruction and i is to be regretted that no more space can be given it here

The meeting then adjourned to the amphitheater of th University of Buffalo, where thereafter the sessions wer held

The first paper on the program was

CONSERVATIVE SURGERY UPON THE BATTLE-FIELD,

by NICHOLAS SENN, Surgeon-General, N G , Ill It was so fu of practical advice that it will be difficult to give a synops of it, and be just to the great amount of well digested information The following are the main points militar surgery will no longer countenance mutilating operation except when nutrition of the limb is arrested by the injury Prompt aid on the battle-field is first to be aimed at, an only to be obtained by a well-trained hospital corps Th embraces the treatment of hemorrhage, to counteract shock primary dressing, immobilization and transportation As t hemorrhage ligation can not be relied on The best measure are elevation of limb, digital compression, forced flexion wit fixation, elastic constriction (with regard to the latter it ha been found that it can be borne for from four to six hour without danger of gangrene or paralysis), antiseptic tamponade In hemorrhage of the three cavities the great triumph of antiseptic surgery can be achieved Favor the escape o blood from the brain by antiseptic drainage In penetra ing wounds of the chest, pack the orifice with an antisept tampon and secure immobility by gunstraps or other mean at hand The same means should be employed in abdomin wounds, adding to them compression of the aorta, if th injury appears below the bifurcation, direct compression the direction of the track of the bullet Where possible, ser the bleeding vessel with hemostatic forceps, leaving them temporarily in the wound if necessary Ligation will usually not be done on the battle field Silk is a much safer material than catgut The ligature should not be tight enough to rupture any of the coats of the vessel Veins should be sutured in incomplete wounds, in the same manner as Lembert's suture Hot water will seal smaller vessels Styptics should be condemned Infusion may become necessary and the 6 per cent salt solution, about 1 000 grams is safest Auto-transfusion by ligation after elevation may be necessary As to shock, its effects are felt immediately after injury, while in hemorrhage the intensity of the symptoms increases progressively Inhalation of nitrite of amyl and hypodermic injections of strychnia, one fifteenth to one-twentieth grain, repeated are the best treatment with alcoholic or diffusible stimulants and recumbent position The primary dressing should consist of the antiseptic package to be carried by each soldier The best place for this is sewed inside of the cartridge belt, half an ounce of salicylated cotton, embedded in it two grams of boric acid and half a gram salicylic acid with a triangular gauze bandage The immobilization should rely on extemporized aid, fastening sleeve to the coat, supporting the arm by lapel pinned up, rifle, saber, bayonet splints

Improved methods of transportation are necessary, owing to increased distance of dressing station and hospital from firing line

At the field hospital, the hemostasis will be made permanent, abdominal and cranial cavity opened if necessary Probing is discountenanced If a bullet probe is to be used, it should be as nearly as possible the same caliber as the projectile Craniectomy is indicated in every case of penetrating wound of the cranium Laparotomy is advisable and feasible in penetrating wounds Primary amputation is only justifiable by extensive injuries of the soft parts and fractures and joint wounds complicated by injury of large vessels and nerves Primary resections for gunshot wounds of joints are obsolete The main object will be to prevent complications by disinfection removal of bullet, if in close proximity of joint, gauze drainage and immobilization

The second paper, although read first, was 'Asepsis in Military Service" by Edward Boeckmann Assistant Surgeon-General, N G, Minn He explained the best and most convenient methods of aseptic surgery exhibiting his portable sterilizer and aseptic dressings

The next paper, 'Septic Bullets and Septic Powder," by Capt Louis La Garde, Assistant Surgeon U S Army He related experiments in addition to those reported heretofore in Vol LVI of the New York *Medical Journal*, showing that bullets can carry disease germs He also demonstrated that of the various kinds of powder used, the black powder being only consumed to the extent of 57 per cent, if fired close enough, might carry microörganisms, and may explain infections like tetanus and malignant edema in a fair proportion of the cases, while the Peyton smokeless powder contains a substance which inhibits the growth of bacteria of less resistant forms of germ life

The next paper was on the

LOCATION AND DETECTION OF MISSILES,

by Prof Roswell Park of the University of Buffalo, late Brigade Surgeon N G, N Y After a historical review of the question, he announced as a main topic 1, under what circumstances is a gunshot wound to be interfered with for the removal of missiles, and 2, how are said missiles to be treated or detected? The answer to the first query is that bullets are to be removed when they do actual harm or for cosmetic effects The injury due to the presence of a bullet may be ascertained either by the rational or the mechanical method The former embraces a study of the physical signs —pain, loss of function or sensation, from simple anesthesia to motor paralysis, ecchymoses, the so called local stupor, the amount and character of hemorrhage

The mechanical means embrace the various probes used for locating bullets They should seldom be resorted to, owing to disturbance of blood clot, entrance of air or infection If probing is resorted to the surgeon should be prepared to complete the work of removal at once He then successively enumerated and explained the advantages of Nélaton's porcelain head probe Culbertson's meerschaum head, Deneux's method Bauden's tire fonds, Loulaut's trocar, Baudry's tenaculum probe, Neudörfer's saw-teeth probe, then the various electric probes (Favre, Neudorfer, Rhumkorff, Luini, Sesemam, Liebreich, Maschek Kovars, Longmore), likewise Fenger's endoscopic method The latest instruments are those of Professor Hughes, the induction balance which failed in President Garfield's case, and the Girdner telephonic probe Professor Park illustrated the action of the latter on a chloroformed dog, into which for experiment's sake shot was introduced through a trocar

A paper by Capt La Garde, "Experiments illustrating the Degree of Powder Burn," is valuable chiefly from a medico-legal standpoint, as it demonstrated that black powder causes powder burn at fifteen feet from a long barrel, from a short one at thirteen feet, at a somewhat lesser distance with the Walsrode and American wood smokeless powder, while it is practically absent in the Peyton powder, which is used in the new U S Krag Jörgensen rifle

General J D Griffith, ex Surgeon General, N G, Mo, read a paper on "Some of the Effects of the New Bullet, and how can a Soldier Protect himself?" The following are his conclusions, which generally agree with the observations of other experimenters battles of the future will not be fought at artilleristic range, any soldier can protect himself by the use of his bayonet as a pick, the best protection is loose dry earth the next best loose sand, at distances up to 1,000 yards the explosive quality of the missile is terrific, this explosive quality is most marked in soft tissues and cavities—the brain and lung tissues are terribly torn and the heart burst, when a viscus is grazed by a bullet, it is much mutilated, vessels are cut, not torn, hence death rate on the field will be very great (four killed to one wounded probably), tendons seem to be the only parts of the body turned aside by the bullet

'The Value of Bromin in Military Surgery," was reviewed in the paper of M O Terry, Surgeon General N G, N Y After an extended pharmacologic and historic review, he proceeded to submit his observations on this remedy and extolled its remarkable effects in dissecting wounds or cuts of all sorts by poisoned instruments, injuries made by a rusty nail, suppurative wounds, especially of joints with sinuses, and phlegmonous inflammations His formula is 1 to 64 of bromin with bromid or iodid of potassium, which he uses either in full strength or diluted He claimed particularly favorable results in phlegmonous erysipelas with 1 to 240, locally applied In diphtheria he uses FestC's treatment of internal administration of 1 to 3 drops of 1 per cent solution hourly In preparation for operations a 'weak" solution with carbonate or bicarbonate of soda In all septic conditions 1 to 3 drops of the 1 to 64 solution every three to six hours

Lewis Balch, Major and Surgeon, N G, N Y, read a paper on 'Details regarding the Medical Service of the National Guard of the State of New York during the Buffalo Strikes of 1892," an eminently practical paper showing that the surgeons of the National Guard had been benefited by the examinations for the service, by the instruction received at Peekskill, and by the organizing talent of General Josiah Porter, and Surgeon General Bryant The sanitary service seems to have been well performed and considerable ingenuity shown in improvisation

Major C Chase Wiley, Major and Surgeon, 18th Reg Inf, N G, Pa, read a paper on 'Field Hospital Service of the National Guard of Pennsylvania," at the twenty-eighth National Encampment of the Grand Army of the Republic, at Pittsburg, Pa, of which he was Medical Director He equipped seventeen field hospitals and treated therein 763 soldiers and visitors, the total number of visitors being 250,000 Four hundred civilian surgeons attended this vast crowd The territory covered by these arrangements was embraced in a circumference of fifty miles Along the line of march, hospital tents were pitched at intervals of a third of a mile, with ambulances interspersed in the column

The report of the Committee on Litter, nominated at the fourth annual session, was submitted by Medical Director A L Gihon U S Navy This committee was appointed to report a desirable form of military litter, and to solicit from medical officers plans and models In response eleven different kinds of litters were submitted in addition to the six of the last session The committee, whose members reside in Boston, New York and Washington, could not meet to submit the specimens to experimental trials and therefore did not feel justified in discussing the subject in their report, they suggested that the Surgeons-General of the Army and Navy be requested to convene a joint board of medical officers of the two services for exhaustive tests, and that their decision be submitted to the Surgeons General of the National Guard, in order that an apparatus for general use throughout the entire country may be selected On motion, this suggestion was adopted

An extract from the report of the committee on the organization of the American branch of the Red Cross Association, and its status in connection with the medical department of the National Guard and U S Army, will show the views of this committee In substance they report as follows it would be unwise to place reliance on volunteer civilian aid in the important and dangerous service of the field ambulances Enthusiasm will sustain individual volunteers in times of danger, but it can not be trusted to carry on the coöperative work of an ambulance service Men trained and disciplined under the iron hand of military control are the only fit instruments for such work In well disciplined military commands the potential energy of the company is infinitely stronger than the mere sum of the powers of its individual components Military cohesion gives increased courage and coolness to the individual and keeps the command at its post of duty, notwithstanding exposures and losses that would demoralize men having no military training A company of volunteer civilians is liable to become disintegrated by any unexpected event of an alarming or threatening character, and such events are of common occurrence on the field of battle But although it is not likely that the American Red Cross Association will be of material service on future battle-fields, the history of the German Association and of our own Sanitary Commission shows that it may be of inestimable value in adding to the comfort of sick and wounded soldiers in hospitals removed from the actual theater of war Besides, under the "American Amendment" the Association has grand opportunities for administering material relief in times of pestilence, famine, flood or other calamities, as the Michigan forest fires of 1881, the South Carolina earthquakes of 1886 and the tidal wave of 1893, the Texas drought of 1886, the cyclones and floods in Mississippi and Illinois

A paper on the "Post Exchange from a Medical Standpoint" was prepared and read by Major Philip F Harvey, Surgeon U S A, at the invitation of the Literary Committee It excited universal interest and was an able, impassionate defense of one of the innovations in the Army for the purpose of decreasing drunkenness, increasing the comfort and contentment of the enlisted men and securing them a fair return for their money as against the extortions of the old tradership system A careful historical review of the birth and growth of the exchange system under Government surveillance formed the first part of the paper Testimony from a number of medical officers of the Army proving the beneficial effects on health and morality is quoted profusely, showing an almost entire disappearance of delirium tremens from the service and great reduction in minor crimes and delinquencies Dr Harvey in a long argument ably meets the objections of temperance advocates to the sale of light beer in the Exchange There is an innate craving for a stimulant among all the nations of the earth We deplore it and bend our energies to overcome it We would, if we could, banish it with the wave of a magician's wand, but any nineteenth century child knows the impotence of such an expedient If we can succeed in substituting a comparatively harmless beverage for one that inflames the passions, poisons the blood, and creates criminals and imbeciles, have we not partially solved the problem? It is a matter of common observation that the effects of beer upon the organism are very different from those of distilled liquors, both as they affect the intellectual faculties and the cellular elements The lunch counter of the Exchange appears also to have its enemies, and Dr Harvey goes to great length to show that there can be no possible harm in having the ration supplemented by a cheap lunch at the Exchange He remarks upon the impediments to a perfect operation of the Exchange, viz, imperfect facilities and faulty arrangements, which with Government aid, which, is due to an institution under its control, can be easily remedied The destiny of the Post Exchange in the event of war is an interesting medico military problem, which offers few difficulties to solve He concludes by enumerating what we should try to realize in future from the Post Exchange

Col Dallas Bache Assistant Surgeon-General U S A, read a paper on

MEDICAL FIELD SERVICE

In future wars, he said, we will not be able to count on the litter bearers, nor can we think of carrying away the wounded *during* the battle, the evacuation of the field in twenty-four hours is all we can hope for (Billroth, Bardeleben) This will be due to the extension of the zone of effective infantry fire from 600 to 1,800 yards and that of the artillery to two and one half miles with shrapnel The percentage of wounded based on former wars can not be relied on, it will especially vary in certain parts of the field, and the medical service can neither be shifted *in extenso* nor provided for beforehand He then gave statistics of the percentage of losses in the last few wars, which varied according to the particular conflict While it averaged about 14 per cent, it rose in the 1st Minnesota at Gettysburg to 82 per cent, and at Gravelotte in the 3d Westphalian Regiment to 37 per cent

The proportion of wounded to killed is generally accepted as 4 to 1, while if we accept the results of the Chilean war for the new weapons, it will be four killed to one wounded The whole loss in battle will be increased and provision for 20 per cent will not be excessive

The work of gathering the wounded is assigned in all modern armies to the stretcher bearers of the line This is a fundamental error These men are trained as fighting soldiers and to divert them to another purpose is illogical and impracticable in the stress of an ordinary campaign The training of these men will become unavailing too, as owing to the casualties of the campaign extensive changes will take place among them

These company bearers are useful in garrison and encampment or after a serious battle, but should not be computed as the allowance of *personnel* for field service Computing carefully everything bearing upon the question, distance of transport, field hospitals, reserves, casualties, the number of the medical service should be 4 per cent of the force

We are without a general scheme of arrangement and finished detail, outside of the management of our posts The organization of our Hospital Corps is suited to a highly divisible administration, that of garrison or post service, but there is no compact cohesion—the men are not a disciplined body The present division of line of assistance between the troops engaged and the division hospital is the collecting station, 800 to 1000 yards from the line This is attended to by the company bearers at present, which, as mentioned above, would not be feasible at all times in actual war This calls for a high degree of military training on the part of medical officers

The next paper was by Lieutenant Lincoln Chase, Mass Vol Militia, on the "Measures for Prevention and Suppression of Dangerous Diseases in Garrison and in the Field" He showed that during the late wars, from the Mexican campaign to the present time, the proportion of deaths from wounds to those from disease were from 1 to 7 up to 1 to 2, according to the duration of campaigns Theoretically, all diseases are preventable The prevention should begin with systematic careful recruiting, especially avoiding acceptance of very young men Young men from the cities are preferable, unless there is time for a year's training An efficient sanitary service will, in the field, be a great preventative Among the special measures of prevention, after enumerating those known to every trained medical officer, he mentions bacteriologic detection of diphtheria and tuberculosis in camp, which seems scarcely feasible

I regret, that as I am about approaching the consideration of the next paper I find that I have almost reached the limit of the space allotted me for this report, as it is worthy of a full and careful synopsis If I dispose of it in a shorter manner, it is done with great regret, as a wide dissemination of the unusual amount of information conveyed is most desirable

The paper is the second one of Col Dallas Bache on the

SELECTION OF SITES AND THE CONSTRUCTION OF MILITARY POSTS IN RELATION TO PROPER SANITATION

Three considerations govern the location of every post military necessity, convenience, and health The latter has been least consulted Commercial necessity in construction of cities entails military necessity in the location of works for their protection But in the construction of our Western posts absolute location in a particular site was not necessary and if sanitary advice had been consulted, loss of life and expensive removals could have been avoided In the location of the large permanent posts throughout the country we have reason to expect certain sanitary interrogatories and careful consideration of the replies There is a tendency to ignore the deeper exhibits of the soil, its air, water, temperature, although they have a highly probable relation to health The regional climatic conditions, such as direction and velocity of the winds, the amount of rain and snows, the prevalence of fogs must be considered, as well as too much or too little shelter by hills The subjects of ground air and ground respiration are important,—an aerial tide, rising and falling with the ground water, moving readily in all directions, loaded with carbon dioxid, the deadly gas, in some places up to 80 per cent always under the control of the ground heat The ground water is another important sanitary factor The composition of the soil will teach us its absorption, and the floor of the subsoil its disposition The diurnal and annual curves, the former reaching four feet, the latter from fifty to one hundred, are of great importance For example, we know that a soil rich in the products of vegetable decay freely supplied with moisture by rainfall or from the ground water, especially if the latter is stagnant and superficial and combined with these a soil temperature of about 65 degrees F will produce malaria Tuberculosis cholera typhoid fever, diarrhea dysentery are more or less affected by the condition of the soil This is not new, but not generally understood As an example he cites one of the new permanent posts, the ground water on whose site is so superficial that when the foundations were laid *the pumps had to be in constant use*, while a short distance off a dry ridge could have been selected

The consideration of the water supply and the disposition of liquid waste are also subjects for consideration One of our newer posts obtains its water from two artesian wells, and its liquid waste flows upon a sewage farm owned by private parties—a precarious arrangement

As to the *construction of posts it includes quarters for the* officers, the non commissioned staff, barracks, hospital, guardhouse, storehouses bakery, stables, repair shops, administration building, gymnasium, riding hall and crematory There should be a fixed amount of floor area, cubic space and rates of air renewal, based in the everlasting change of the composition of our units, on a possible maximum The bathrooms and closets should not be distributed among the companies, but should be central, under one management, removed from the barracks The barracks should not be in one building, but separate pavilions

The result of more careful attention to the sanitary condition of troops is that from 19 per cent of mortality during the period of 1840–59 it has fallen to 4 per cent, not including war losses, with a corresponding ratio for discharges for disability

The last paper read was by Major A C Girard, Surgeon U S A, on

DUST A SOURCE OF TYPHOID INFECTION,

a histological and clinical essay, based on his experience during the Chicago riots when a part of the cavalry, who were camped on newmade and probably infected ground, had thirty cases of typhoid fever, while Chicago was healthy, and troops camped on other ground or *in the city* did not suffer A whole regiment of infantry camped on the same ground with the above cavalry had no cases of typhoid The water and food was the same for all the troops The flies were equally bad through the whole camp By exclusion he believes this to be dust infection, from dust groomed off the horses and deposited in the mouths of the men

A large number of other papers were presented and read by title An enumeration would not add to the value of this report

A pleasing incident occurred on the second day of the meeting, when Major J V R Hoff, Surgeon U S A, on behalf of the Association, in an eloquent speech presented to Surgeon General N Senn, N G, Ill, a massive silver trophy in the form of a circular shield about eighteen inches in diameter, upon which was represented a ministering angel with the recumbent figure of a wounded soldier in bas relief, in the center the red cross in red enamel around the outer edge of the buckler in raised letters was the following inscription "To Nicholas Senn, M D, Ph D L L D, Surgeon-General N G, Ill, the Association of Military Surgeons of the United States inscribes this testimonial, in grateful recognition of his services as its founder and first President, and in the advancement of military surgery Fifth Annual Meeting A D, MDCCCXCV" General Senn responded with his usual eloquence

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Medical Society of the State of Pennsylvania

Proceedings of the Forty fifth Annual Meeting held at Chambersburg, Pa, May 21 1895

[Special correspondence of the Journal]

The President, Dr John B Roberts of Philadelphia called the Society to order at 9 A M Prayer was offered by Rev J A Crawford

Hon J Stewart delivered an Address of Welcome

The Secretary read his report, showing the marked improvement in the membership of the county societies, due to the efforts of the committee on the extension of membership

The President briefly *outlined his views as to the present* management of the State Society, by which the details of business are left solely in the hands of the Committee of Arrangements He urged the reference of the work of the society *to the board of trustees On motion, a committee* of five was appointed to consider this idea and report next year Committee Drs W T Bishop, of Dauphin, Alex Craig, Lancaster, W H Daly, of Allegheny, H S McConnell, of Beaver, and on motion Dr Roberts was made the fifth member

Report of the Treasurer showing a large surplus in the treasury, and of the Publication Committee, showing the *publication of 2,700 copies* of the transactions and the mode of their distribution was read The recommendations of the latter were *referred* to the special committee of five

The Scientific Committee reported their work, the adoption of seventy five papers for the meeting

Dr A Koenig, *of Allegheny read the report of the* Committee on Pharmacy, giving a concise account of a number *of new remedies and their value*

Dr Edward Jackson of Philadelphia read the report of *the delegation to the* American Medical Association for the meetings of 1894 and 1895 This report congratulated the society upon the expected improvement in the Association Journal *as a result of the efforts of this society*

Dr C L Stevens Bradford read the report of the committee on extension of membership, showing the awakening of interest throughout the State in regard to county societies, a general effort to increase the membership, and a plan for the extension of university teaching by means of lectures, etc to be given by prominent members, the traveling expenses, only, *to be borne by each society It* was agreed that this work should be continued by a much smaller committee

Dr H G McCormick of Lycoming, read the report of the Board of Medical Examiners, showing the result of the examinations held thus far, etc

The report of the Rush Monument Committee was read and the committee continued Dr H F Hansell of Philadelphia, read the report of the committee on contagious *ophthalmia, and presented* the bill now before the Legislature on this subject A full discussion ensued, as many *seemed to feel this* might prove mischievous legislation Finally the report was adopted The action of the committee in presenting this bill was approved

The report of the Legislative *Committee* relative to the efforts for a law to prevent the disclosing by physicians of *communications from patients* in the courts, which was defeated, and for the care of the insane, which thus far showed *no results*, was read and the committee continued

The afternoon session was almost wholly *given to the reading* of scientific papers

Dr I C Gable of New York, *read the* 'Address in Medicine" He gave a review of the present status of thought of the more important subjects which have excited general interest in the past year The various morbid processes which are grouped under the class of infectious diseases received special consideration He regarded the antitoxin blood serum treatment of diphtheria and other infections as the most important advance recently *made in modern therapeutics* Modern chemistry and medical progress is rapidly enriching the materia medica in the new antiseptics and is making solid advances as to the true action of those medicines, at first employed empirically, which have long been used as disinfectants and specifics We are largely indebted to bacteriologic science and laboratory technique for the clearer light which we possess to-day of the etiology of many diseases and the true mode of action of many medicines

Dr T D Dunn of West Chester, read a paper on "Sequelæ of Typhoid Fever" Erythema nodosum occurred in three cases, arterial and venous thrombosis in two cases, abscesses and pariotitis in two, nervous affections in five cases These complications were given in full with their treatment

Vice President R Armstrong of Clinton in the *chair, the* President Dr J B Roberts, read a paper on 'Treatment of Malignant Tumors with the Toxins of Erysipelas" An account was given of the reasoning by which Coley was led to attempt the cure of inoperable *malignant* tumors by the toxins of erysipelas The method of preparing the toxins and the reasons for combining them with the toxins of bacillus prodigiosus were given, the author reported three cases in which he used *this* method with success He also referred to the successful cases reported by Coley and others Stress was laid upon the fact that the only proved cure of malignant disease is early and radical extirpation The toxins may have to be used in cases that have postponed operation oo long, or after the operation, in the hope that recurrence may be prevented The hypodermic injections of the toxins are liable to be followed by depression of the patient's strength, but are justifiable because they hold out the only hope of success in cases not suitable for operation Sarcomatous tumors were said to be more amenable to this treatment than carcinomas

Dr Jas Tyson of Philadelphia, read a paper on 'Typhoid Fever and the Cold Bath," and exhibited an apparatus for the purpose, which was readily used with but little disturbance to the patient

Dr J M Baldy of Philadelphia, read a paper on the 'Prophylaxis of Pelvic Inflammations in Women" He alluded to the number of ailments which arise from these The main, practically the only cause, the gonorrheal infections These spread over the whole mucous surface, prevent the occurrence of the pelvic infection, and attack the acute endometritis early before it has passed up The danger of the infection is lessened and the power to create damage in the tubal cavities is diminished In all cases of acute gonorrhea which have extended into the uterus, the patient must be looked upon as suffering from an acute endometritis In acute puerperal cases the germs first attack the free blood clots and accumulated exudates in the cavity of the uterus Here the free use of the intra-uterine irrigator will flush out the infected products and end the trouble If the patient is allowed to go for twenty-four hours, *in all probability the infection has passed beyond the* reach of douching Then we must follow the germs to their hiding places The curette now comes in and must be used thoroughly He described the method of operating

Dr J M Batten of Allegheny, read a paper on 'Tuberculosis" He showed by clinical observation that the tuberculosis habit is visited to the third and fourth generations That as far as it came under his observation it is not contagious At least only slightly among those who have not inherited the tuberculous diathesis He spoke of the cell theory of tuberculosis and the old theory of heredity, and closed by stating that the proper plan to prevent the disease is to educate the young people how they ought to select wives and husbands in order to have healthy posterity

Dr W S Stewart of Philadelphia, gave his experience in the treatment of diphtheria with the subsulphate of iron He detailed at some length his cases, insisting upon this as the plan of treatment which offered the best prospect of safety

Dr J W Roop of Harrisburg, read a paper on "Acute and Chronic Cystitis," and its successful treatment with the bichromate of potassium He alluded to the causation by neglected gonorrhea, the unskillful use of the catheter, sepsis, etc Remove the cause, rest in bed, keep the urine neutral, and diluted, locally washing out the bladder, then follow with astringents, etc Boracic acid is best, hydrogen dioxid and the potassium permanganate are useful The bichromate of potassium had in his hands been of great value, and he did not know of its use by others

Dr H R Wharton of Philadelphia, read a paper on "Treatment of Nævus" He recommended the application of nitric acid to the capillary nævus, or ethylate of sodium, but preferred the use of the nitric acid in this form of nævus In the treatment of port wine mark, he recommended multiple scarification or electrolysis In the treatment of venous nævus he preferred excision in favorable cases, as a treatment which was most thorough and left the least deformity In cases unfavorable for excision by reason of their size and situation, he recommended the use of the ligature or subcutaneous ligation He called attention to the importance of early treatment in all cases of nævus, on account of the rapidity of growth in this form of vascular tumor, and insisted upon the importance of watching these growths carefully and if they increased in size he considered it very unwise to delay the prompt resort to some of the various forms of surgical treatment

Dr E LaPlace of Philadelphia read a paper on one hundred and twenty-five cases of hernia in which the radical cure was performed This was a detail of his cases, showing the best method for the relief of this trouble

Dr H S Anders of Philadelphia, read a paper on

THE PRESENT STATUS OF THE SANITARY MOVEMENT FOR THE ADOPTION OF THE INDIVIDUAL COMMUNION CUP

Attention is directed, at the outset, to the fact that while *the possible, even the probable dangers of the communion* cup were recognized, privately and several times publicly, by the members of the medical profession, it has been but little more than one year since the first use was made of the individual communion cup by any church This method of administering the communion wine is now believed to be the only sanitary, safe and entirely practical and successful procedure Besides it has the sanction of scriptural precedent, and of ministerial argument and recommendation One year's history, carefully scanned, reveals marked progress, not only in the awakening of interest and some general study of the grounds for the innovation, but also in the ready adoption of the individual cup in a rapidly growing number of churches of most Protestant denominations It is hardly necessary before a body of intelligent and wide-awake physicians, to argue in abstract still less in detail, in favor of the change The writer's paper, "Prophylaxis in Churches needed by the adoption of Individual Communion or Chalice Cups," read before the Philadelphia County Medical Society Sept 26, 1894, contains the historical, rational (inductive and deductive) and practical argument for the abolition of the common and the substitution of the individual communion cup Since the first bacteriologic investigation by Dr Chas Forbes (U S M -H S) of Rochetter N Y , of the common cup's rim and the dregs after a communion service, and the writer's studies two months later, so many churches have obtained and used the individual cup method, that it is difficult to estimate their number

The first church in Christendom, so far as known, to adopt this modification was the North Baptist Church of Rochester, N Y , at the communion service held May 6, 1894 *Within one month thereafter, fourteen churches in that city had* made the change, and six more had signified their intention to do so These included the Baptist, Presbyterian and Methodist denominations

After the writer's investigations, the Fourth Baptist Church adopted and first used the individual communion cup in Philadelphia One Presbyterian, one Methodist and one Reformed Church have followed The Baptist, Presbyterian, and Reformed pastors are agitating the matter in their respective congregations and associations In New York City, in Brooklyn, in Pennsylvania, Massachusetts, New Hampshire, Ohio, Illinois, Missouri, Virginia, Georgia, and California, and perhaps other States the movement is progressing after calm, intelligent and reverential thought The State Medical Society might well sanction the wholesome sanitary reform by stamping it with its official approval and adopting suitable resolutions to be forwarded to the county societies health boards, and church ministerial associations

Dr J M Barton, Surgeon to the Jefferson College Hospital and the Philadelphia Hospital read a paper on the

DIAGNOSIS AND TREATMENT OF ACUTE INTESTINAL OBSTRUCTION

Within the last few years the public are ready to accept surgical aid with much less deliberation than formerly, but they still deliberate too long in cases of acute intestinal obstruction Until recently the chance to operate at all, in such cases was extremely rare and unless our successes are greater than they have been there will be but little to encourage the sufferer, in future, to submit to the knife The mortality is enormous and almost entirely due to delay before operating If it were done early, while the patient is yet in good condition but few would perish from an abdominal section, lasting twenty minutes, and almost bloodless Both in hospital and in private the patient is not unusually in dying condition when the operation is agreed to The writer narrated in full one case where the patient was sent 250 miles, to him on the eighth day of the disease and the fifth of fecal vomiting, the collapse was so great that though the operation lasted only ten minutes he perished a few hours later, if the operation had been performed five days sooner, when fecal vomiting appeared, he would have recovered

Acute obstruction is divided into four forms

1 Strangulation by bands or through apertures, this form is most frequent in young adults with a history of previous peritonitis Vomiting begins early and is generally stercoraceous, constipation is continuous and absolute, tenesmus is absent, there is great prostration Such cases require immediate operation as death generally occurs by the fifth day

2 Volvulus Here the bowel is so tightly twisted as to at once obstruct the nervous and vasculur supply and produce immediate prostration It occurs in males over 40 who have suffered from constipation Local tenderness occurs early, vomiting appears late and is rarely feculent, constipation is absolute

3 Intussusception occurs mostly in children A tender

tumor can be felt in the abdomen and occasionally in the rectum Absolute constipation is rare, diarrhea with blood is not uncommon

It is not well to spend valuable time in attempting to determine the character of the obstruction, it is enough to know with certainty that the intestine is obstructed and the obstruction is not due to fecal impaction

Diagnosis of Acute Obstruction —An individual, probably in perfect health, is suddenly seized with severe abdominal pain which may remit or distinctly intermit The abdomen is not tender at first, copious and severe vomiting appear early, the matters vomited are first food, then bile, then coffee-ground looking material and lastly they are stercoraceous Before the coffee ground vomit appears, mouthfuls of reddish water are often brought up without nausea or retching Except in cases of intussusception the constipation is absolute, not even wind passing There is some abdominal distension and marked shock

Acute obstruction must be differentiated from

1 Ordinary colic from indigestion This is preceded by signs of indigestion, gaseous eructations accompany the vomiting, gas is freely passed by the bowel, diarrhea usually accompanies or terminates the attack, the vomiting never becomes coffee ground or fecal

2 In hepatic colic the pain and tenderness is at the margin of the right ribs The pain is intense with complete intermissions, the vomiting is never feculent, there is no constipation, gas passes freely, there is no abdominal distension, light jaundice may be present and occasionally chills and fever

3 In renal colic the pain begins over one or the other kidney, then passes down the ureter to the testicles and thighs The urine is scanty and may contain blood, it is passed frequently and with pain, there is no constipation and no abdominal distension

4 In appendicitis the vomiting ceases in a few hours and never becomes stercoraceous, the pain increases and is limited to the right iliac fossa There is frequently a distinct mass, and always an exquisitely tender spot to be found in the same region, the temperature is usually elevated and constipation is unusual

5 In general peritonitis a history of injury or preceding disease can usually be found, the bowels act freely and wind passes readily in the early stages of the disease The vomiting is rarely violent

Fecal impaction is most common in adult females with mental troubles, there is a history of long continued and severe constipation, vomiting appears late, is scanty and rarely feculent The retained feces can be felt in the colon

Treatment —The medical treatment consists in washing out the stomach, kneading the abdomen, inverting the patient and giving injections of air, gas or water It is rarely successful, exhausts the patient, wastes valuable time and occasionally ruptures the intestine In but few of the cases I have examined could any of these methods have produced the slightest effect If these methods are not immediately successful, the abdomen should be at once opened and under no circumstances should operation be delayed after coffee-ground vomiting has appeared When obstruction is suspected, all preparations should be at once made for the operation, so that the moment the diagnosis is unmistakable there may be no delay whatever, it ought to be usually done within twenty four hours of the appearance of the symptoms If the location of the obstruction is known the most convenient incision is made, if not known a median incision, just below the umbilicus and large enough to admit the hand is employed If the seat of the trouble be not at once evident, the head of the colon is sought, if it be distended the obstruction is in the large intestine and is readily located If the head of the colon be not distended, the collapsed ilium is rapidly passed through the fingers until the seat of the difficulty is arrived at If the obstruction is due to a band it should be removed close to its attachments so that it may give no further trouble When it is due to an adherent appendix or to Merkel's diverticulum they should be entirely removed In strangulation through slits or apertures, it is well to close the abnormal opening after the bowel has been reduced If the strangulated gut be gangrenous it should be removed and an artificial anus made An anastomosis operation can be performed later if the patient survive The patient in acute obstruction is never in a condition to have the shortest anastomosis operation performed A volvulus must be untwisted and an intussusception reduced If reduction is impossible, an artificial anus must be made above the obstruction If, after we remove an obstruction, no matter what its nature the bowel be much over distended, it must not be left in this condition, but must be emptied even if we have to puncture it for the purpose or establish an artificial anus If the patient is in extreme collapse, with a rigid distended abdomen, operation should not be refused No anesthetic should be given as it is apt to provoke fatal fecal vomiting Heat and strychnia should be freely used A short median incision just below the umbilicus should be made, just large enough to permit a finger to enter and bring out the first distended loop of bowel that presents itself, an artificial anus should be made and opened at once

If the patient is to be sent to a city hospital, wash out the stomach and give stimulants, use strychnia hypodermically, put the patient on a stretcher and surround him with artificial heat Send short plain history with him Telegraph surgeon so that the ambulance may meet the train and there may be no delay when the patient reaches the hospital

Evening Session

The President called the society to order at 8 o'clock

Dr H H Longsdorf, of Carlisle, read the Address on Hygiene She entitled it

THE MORAL FACTOR IN HYGIENE

The science of hygiene is under a great onward impulse through the discoveries and researches in bacteriology The theories based upon these researches have seemed to make the health problem an easy one to solve, but in spite of these tangible results the retrospect and outlook are not reassuring Many questions on sanitary lines remain unsettled and there is a growing fear that the race product is on a lower average than formerly, that the vigor and manhood which constitutes the real wealth of the nation is declining

The causes for this must be looked for in the increase of the dissolute and defective classes and the want of restraint put upon their disease developing power

Hygiene in its ultimate meaning is *race development*, and from this standpoint it must be considered among the many humanitarian and sociological questions that perplex the thinker and threaten the integrity of the body politic If prevention is the key note of the medical thought of the day, it is the height of wisdom to pay heed to the sources of moral contamination Overcrowding in cities, child labor, unnatural and unremitting toil by the mothers, are some of the most potential of these causes, and they appeal to the hygienist and to the legislator on the basis of race deterioration and loss to the State

The absolutely dissolute should be isolated and their labor made productive, 1, to prevent the transmission of their pernicious qualities, 2, to relieve the State of the burden of their maintenance in asylums and reformatories

Dr G Betton Massey, of Philadelphia, read a paper on

RECENT EXPERIENCE IN THE ELECTRICAL TREATMENT OF FIBROID TUMORS AND CATARRHAL AFFECTIONS OF THE UTERINE TRACT

In the treatment of two classes of fibroid tumors there is no conflict between the claims of electricity and of the knife There are cases in which electricity in expert hands can give 100 per cent of practical cures, not necessarily cosmetic cures, but completely satisfactory, in the comfort and well being of the patient There are also cases in which electricity can only do harm, and in which ablative surgery is not only wise but imperative In a third class true conflict occurs, and I may specify this class as made up of large tumors causing much deformity, which by reason of their situation or constitution require prolonged efforts for electrical absorption If the deformity is great it becomes a question for the patient to decide whether the danger of an operation should not be faced Operations are frequently performed on small tumors, in which a complete and permanent cure can be assured by electricity Hemorrhagic tumors of all sizes should be placed under treatment of this kind, the author never having had a failure in curing a hemorrhage or pain and reducing the size Of non hemorrhagic large tumors, reduction or disappearance is most certain in instances of symmetrically developed interstitial growths The class in which electricity is not indicated embraces degenerating tumors, quickly growing tumors, and all tumors associated with purulent inflammation of the appendages One of the most important services of electro therapeutics to gynecology is the prevention and cure of tubo ovarian disease This affection is dependent upon a uterine catarrh, hence the cure of the endometritis is in many cases the prevention of the former The positive pole is indicated within the uterus and the negative within the vagina at different applications A large number of young girls have thus been restored to full womanly health in spite of the fact that some of them had been, advised to submit to an unsexing operation

DR. C P NOBLE, of Philadelphia, read a paper on "Movable Kidney" He gave at length the mode of diagnosis, etc The trouble seemed much more common than he had apprehended when he came to review the number of cases which had come to his notice

DR BENJAMIN LEE, of Philadelphia, read a paper on

THE NECESSITY FOR A STATE SYSTEM OF REGISTRATION OF VITAL STATISTICS IN PENNSYLVANIA

It is a matter of profound astonishment to intelligent foreigners visiting this State, and even to residents of neighboring States, that the great and venerable commonwealth of Pennsylvania, while having nominally a Central Bureau of Vital Statistics and a State Superintendent of Vital Statistics, is almost alone among civilized governments in failure to furnish the machinery by which such a system can be efficiently maintained Apart from the general advantage of such a system and the question of State pride, there is the fact that the demand for its establishment is widespread, and constantly reiterated by a large and intelligent class of our citizens for all kinds of purposes Inquiries for such information come from professional men, manufacturers, corporations, libraries, literary societies, the various departments of municipal administration and from officials of all kinds It may safely be said that vital statistics form the basis of all sanitary work Their registration and tabulation are to the sanitary officer, and therefore to the State, what "taking account of stock" is to the merchant

1 In order that municipalities may understand the necessity for sanitary work it is not enough to quote to them the statistics of foreign countries They need to have the subject brought directly home to them, by showing that a neighboring town or village has exactly so many fewer deaths, or so many fewer hundred cases of sickness each year than take place within its own limits, from the fact that the neighboring town has spent more money to obtain pure water by an improved water supply, pure air by abating nuisances, and pure soil by a proper system of sewerage In Massachusetts and nearly all the New England States, in New York, Michigan, Illinois and many other States of the Union, such systems have been in active operation for a considerable period, and the records have proved of the greatest value, in the direction just mentioned

2 Registration of vital statistics has an essential use in preventing the concealment of crime The statement will scarcely be credited that in this State outside of large cities and a certain number of incorporated boroughs, human beings may die and be put under the ground without official record of any kind of the circumstances The death of a blooded horse or an Alderney bull is carefully registered in the Herd Book, but the man dies and leaves no trace, as far as any record for future reference is concerned Is it any wonder that grave-yard insurance has flourished in Pennsylvania? In a civilized community no one should ever be buried without a burial certificate issued by authority of law, and a statement of the cause of death attested by a physician

3 Properly recorded vital statistics ensure the means of proof of personal identity, of right to property, and of substantiating just claims for the pensions for widows and orphans of those who have died in the defense of their country

4 A ready means is thus afforded of the proof of age for the prevention of election and other frauds

5 But outside of these conditions, weighty as they are, when we regard the conditions of a State rather than a city, we have to consider those of the growth of the commonwealth and the relative increase of population It is desirable to know how many children are born each year in the State, whether they are of native or of foreign parentage, and what the relation of the number of births is to the number of deaths, and thus be able to appreciate what is the natural movement of population, independently of increment by immigration

6 The writer is convinced that there is no State in the Union with a lower general death rate than that of Pennsylvania, but he has no means of showing it to be so As indicating the value which is placed upon work of this kind in other States, it may be mentioned that New York employs from six to eight clerks on Vital Statistics alone, whose salaries aggregate $8,000, Michigan employs seven with salaries amounting to $7,000, Massachusetts five clerks and an editor, with salaries amounting to $4,220, and the little State of Rhode Island, whose entire population is less than that of "Greater Pittsburg," one clerk at a salary of $500 There is a bill now before the Legislature of Pennsylvania providing for the appointment of a clerk in the Bureau of Vital Statistics at Harrisburg, and calling for the very modest appropriation of $5,000 to inaugurate and carry on this important work It is hoped that this society will put on record an expression of its approval of this effort to elevate Pennsylvania to the plane of other civilized commonwealths

DR T S CULLEN, of Baltimore, Md, having been elected a member by invitation read a paper on "Carcinoma Uteri," illustrating it by an admirably prepared diagram of the uterus

DR G S HULL, of Chambersburg, read a paper entitled "Ten Minutes in Electricity" He alluded to the electrolytic effect in removing hair, the effect is obtained from eight to ten LeClanche cells connected in series It is cheap, free from odor, and easily kept in order It may also be used to remove warts, in uterine growths, etc Here, is need for the skillful only to tread Electric humbugs are abundant, as the electric inhaler, electric head band, electric hair brush, etc He alluded to argon which he believed the polarizer causes the skin to absorb, not oxygen as thought by many To lie down on a downy couch when overworked or ill, and by a conductor running from an ankle to a polarizer, and with another cord leading from the instrument with its imperishable material to the moist earth or a cake of ice, to cease even from the labor of breathing, and have this perpetual source-of-energy machine force argon into one's blood and give new life to every part—"this were a consummation devoutly to be wished"

Adjourned till Wednesday

SECOND DAY

The society resumed its sessions at 9 A M

The Nominating Committee was announced and retired to prepare its report

DR C L STEVENS, of Athens, read the Address in Surgery He urged the use of anesthesia as necessary for the proper doing of the work of the surgeon Next the need of care in diagnosis, the careful attention to details, to rest in pain, to the need of massage and motion early in joint injuries, to the keeping of limbs in proper position during inflammation, lest we have ankylosis, contraction of muscles, etc Examine with great care in all cases of pain, in the bowel lest we overlook a strangulated hernia, in all pain and swelling of joints, lest we have pus, when we are only thinking of rheumatism Regard with much suspicion any breast trouble lest there be cancer and it get beyond the reach of our skill He spoke of the needed care as to asepsis, and gave at some length the proper method of assuring this

DR F LE MOYNE of Pittsburg, read a paper on the

NECESSITY FOR THE ADVERTISEMENT AND ISOLATION OF CERTAIN INFECTIOUS AND CONTAGIOUS DISEASES

He urged upon the profession the importance of this idea especially in scarlatina and diphtheria Such affections are conspicuous causes of suffering and mortality and by proper precautions they are to a great extent preventable Existing laws in our State commit the strange inconsistency of exacting precautions and enforcing restrictions in regard to smallpox, which is to a great extent under control by vaccination, while scarlatina and diphtheria to which a much larger proportion of the population are susceptible, are not subject to proper legal regulations and have almost unlimited opportunities for dissemination The members of the medical profession are the natural and acknowledged guardians of the health of the people, and it is incumbent upon them to lead the public mind safely in that direction by emphasizing the fact that every case of scarlatina or diphtheria not carefully isolated and plainly placarded is a shameful menace to the surrounding population

DR J J BUCHANAN of Pittsburg, read a paper entitled,

RUPTURE OF THE TENDON OF THE QUADRICEPS FEMORIS,

giving a summary of the literature of this comparatively rare accident, together with the history of a case in which he had opened the knee joint, drilled the patella and sutured the tendon in place The result was all that could be desired, a strong and useful joint He quoted the statistics of the injury as compiled by Maydl of Vienna, and Bull of New York, and added cases of his own collection which had been reported since the papers were published, as well as a few which had been overlooked by these authors The total number of cases given is 120 Suture of the tendon was performed in ten cases, as follows 1 Lister (1878) in Roxburgh's case, by a complicated plastic operation repaired an old rupture with buried catgut sutures with a good result

2 Luning (1880) sutured the tendon with catgut as a part of the repair of an open wound, made by a butcher's cleaver, result a freely movable joint

3 McBurney (1885) sutured the tendon with catgut and a wire retention stitch, result perfect

4 Wilkin (1887) sutured the tendon with silkworm gut as a part of the repair of an incised wound of the thigh, with good function and almost perfect flexion

5 Kaufman (1888) sutured the tendon to the muscle from which it had been torn, complete recovery

6 Midelfast (1888) operated on a case in which the patella was found driven between the femur and tibia He sutured the tendon and secured primary union

7 Bull (1888) sutured the tendon with catgut, with good result

8 Chaput (1893) sutured the tendon

9 Buchanan (1894) drilled the patella and sutured the tendon to it with silkworm gut, perfect result Considering the fact that without operation, an imperfect result has occurred in about half of all cases the author considers the operative procedure one to be recommended

Dr Jos E Willetts of Pittsburg, read a paper on 'Intra-Tympanic Disease"

Dr A P Hull of Montgomery, read a paper on "Treatment of Typhoid Fever by Guaiacol" This was a report of thirty two cases treated during September, October, November, December, 1894, and January February, 1895 The first eleven with two deaths, and the last twenty one with guaiacol internally continuously, and externally when necessary to lower the temperature, with no death, an average duration of fever of nineteen days, with the grave symptoms modified and a promptness in getting up after the fever had left them, closing with some reasons why the antiseptic is the rational treatment for typhoid fever

Dr L J Lautenbach of Philadelphia, presented a paper on ' Deaf Mutes—Can anything be done by Treatment?"

Dr Murray G Motter of Lancaster read a paper on the "Clinical Study of Typhoid Fever"

Three cases, three types, a threefold purpose These cases have been selected because of the following conditions presented

Case 1—*a*, differential diagnosis frequently mistaken, *b*, the type and duration of the pathologic process, and the youthful patient's remarkable powers of resistance—both to the disease and to the misapplied treatment, *c*, the complete and under all the circumstances, rapid recovery, under a strictly *noli me tangere* régime

Case 2—Three initial complications *a*, pleuritis, *b*, abortion, *c*, acute nephritis

Case 3—*a*, the severity of the initial symptoms, *b*, the grave cardiac complications, *c*, rapid subsidence of the fever, under hydrotherapy (Brandt)

The object of this contribution is to demonstrate

1 The dangerous, often fatalfal libility of "pathognomonic symptoms," so-called

2 The folly of *any* absolute, invariable, "routine" treatment

3 The urgent necessity, *a*, of recognizing each case as a law unto itself, and *b*, for treating—*not* the disease nor the symptoms, *per se* but—*the patient*

Dr W T W Dickeson, of Media, read a paper on "Microbes and Moulds" The Doctor gave a brief account of the deleterious effects of these organisms on animal and plant life, where and in what substances they are found—water, milk, animal and vegetable food, etc The common nourishment of bacterial growths spores of dangerous diseases The susceptibility of individuals of low vitality to succumb to germ diseases and their inability to throw them off were next tersely given Then he alluded to epidemics, septic poisoning, moulds and fungi that attack fruit, grain and flowers Ptomaines and serums of cholera, tuberculosis erysipelas cocci and the antitoxin of diphtheria concluded this highly interesting paper

Dr L H Adler, of Philadelphia, presented an article on 'Treatment of Fistula in Ano by Lange's Method or Immediate Suture in the Tract" In no instance was there need to regret the *operation* He considered it of decided advantage Even if primary union is not obtained the patient will be in the same position as if no attempt had been made, whereas if healing ensues the gain is a very considerable one

On motion of Dr L H Taylor, of Wilkes-Barre, it was

Resolved That the Medical Society of the State of Pennsylvania considers the registration of births, marriages and deaths at the central bureau of the Capitol of the State a matter of the utmost importance in the interests of medical science, of public health, of protection to human life, therefore

Resolved, That the Society respectfully memorializes the honorable the Senate and the House of Representatives of Pennsylvania in favor of the passage of the bills introduced at the present session, to authorize the State Board of Health to employ a clerk for the registration of vital statistics, to confer the powers of a board of health on the school board of each township, and so to increase the appropriation for the board as to enable it to efficiently discharge this important duty as assigned it by law

Resolved, That copies of the preceding resolutions, signed by the President and Secretary, be at once transmitted to the honorable Wesley C Thomas, President *pro tempore* of the Senate and the honorable Henry F Walton, Speaker of the House of Representatives at Harrisburg

At the afternoon session the Committee on Nominations reported as follows

President, W S Foster, Pittsburg

Vice-Presidents, John Montgomery, Chambersburg, A P Hull Montgomery, T H Sharpneck, Nineveh, A B Brumbaugh, Huntingdon

Secretary, William B Atkinson, Philadelphia

Assistant Secretary, C L Stevens, Athens, Treasurer, G B Dunmire, Philadelphia In addition, censors, delegates, etc Next place of meeting, Harrisburg

The report was adopted

(To be continued)

Illinois State Medical Society

Abstract of the Proceedings of the Forty fifth Annual Meeting, held at Springfield, May 21, 22, 23, 1895

[Special correspondence of the JOURNAL.]

(Concluded from page 856)

In the evening of the first day the President, Dr Daniel R Brower, delivered the Presidential Address, selecting for his subject

SOME ABNORMALITIES OF PHYSICAL CONFORMATION OBSERVED IN CRIMINALS, WITH CAUSATIVE AND CORRECTIVE CONSIDERATIONS, ILLUSTRATED BY THE STEREOPTICON

The speaker prefaced his remarks by saying that we were living in a marvelous age and that the closing hours of the nineteenth century were full of wonders It is not a hundred years ago since the great Pinel established beyond the possibility of controversy the fact that insanity is a disease Prior to that time lunatics were regarded as either possessed of the devil or as victims of divine wrath As a result of the rapid progress that has been made from time to time there are now scattered throughout this and other civilized countries hundreds of hospitals for the treatment of the insane, and no one to-day considers it other than a disease, subject to the same laws and governed by the same principles as any other affection Pictures of noted criminals were then projected upon the canvas, their histories detailed, and the peculiar conformations of the head pointed out Dr Brower said there was a great difference proportionately in the size of the brain of a criminal as compared with the brain of a normal individual, and to illustrate this point a picture was shown from Lombroso's book on "Criminal Woman," which conclusively showed that the average size of the criminal brain is very much smaller Dr Brower closed by directing attention to the question of marriage, saying that we should have added to the marriage license certain requirements certified to by some responsible practitioner of medicine, giving evidence that both parties are in good health, that they are not criminals, drunkards or paupers, and that their grandparents were not insane, epileptic, suicidal, or in any way degenerates With such requirements we would see crime, pauperism, and insanity on the decrease, and would some day witness a race of men and women rising up capable of achievements of which the world has never dreamed

Section II

Surgery, Surgical Specialties and Obstetrics

Chairman, Dr Wm E Guthrie, Bloomington
Secretary, Dr J A Baughman, Neoga

Section called to order by the Chairman

ADDRESS IN SURGERY

The Address in Surgery of this Section was delivered by Dr Duncan Eve, of Nashville, Tenn He said surgery recognizes its true disciples everywhere It confesses its obligations wherever benefit is conferred It owes much to the South and West It gratefully remembers McDowell as the father of ovariotomy It pays willing tribute to Crawford Long as the discoverer of ether as an anesthetic It gladly retains the name of Brasher, who triumphantly performed hip-joint amputation It, with much pleasure points to Gilmore, as the first to successfully remove a kidney It recalls with pleasure Smythe's successful ligation of the innominate artery And to Dudley, Pope, Hodgen, Sims, Wyeth, and many others, refers with equal delight for their many and original procedures There are two names in this State that surgery honors—Nicholas Senn and J B Murphy For the good of humanity, progress in military surgery has been retarded by an epidemic of peace It is the duty, however, of the military surgeon "in time of peace to prepare for war" Dr Eve agrees with Senn that the great factors which will modify surgery on future battle fields will be 1, prevention of wound injection, 2, conservative treatment of gunshot injuries of the extremities, 3, prompt, direct operative interference in the treatment of penetrating wounds of large cavities To this end, we find new and important devices, as in the construction of field hospitals, litter carriers, operating tables, dressing cases, travois, etc Railroad surgery has established a province of its own Here is tested the utmost endurance and resistance of which vital force is capable, recovery often attained in the midst of despair, fatal results where injuries appear light and hope is buoyant Here conservatism can hold complete sway Within the last few years the treatment of railway injuries has in this respect improved so much that the results mark this era as one of the brightest in the history of the surgical world On account of our increased knowledge of cerebral topography, intracranial surgery has made great progress Cysts or abscesses of the brain can now be diagnosed by the use of a fine aspirating needle, introduced through an opening made in the skull by a watchmaker's drill The different sinuses can be entered, foreign bodies removed and hemorrhage controlled by means hitherto unknown We can not fail to observe with much satisfaction the wonderful progress that has been made in abdominal surgery Of the many operations for intestinal anastomosis, Murphy's button deserves special mention Sufficient time has elapsed since its introduction to place its use on a sound basis Within the last year we are led to believe that inguinal colotomy has to a great extent superseded the lumbar operation because of the ease with which it can be accomplished, because a better spur can be obtained in the inguinal region, and because of the patient's more rapid recovery, from the operation

The dreamy speculations of the past have given way to the realities of fact, and the universe is throbbing with the pulse of progress in every department of thought We are in the dawn of a new era—an era charged with results tremendous in their issues and their influence upon humanity at large Who can divine what will be the glory of its noon-day splendor? Indeed, it may be said at this moment, having concluded the journey through the wilderness of the past, we stand upon the mountain of view and gaze into the promised land of the future Our hearts swell with rapturous emotion, while our minds entranced contemplate the vision that rises before us with all the charm of perfect enchantment

"For I doubt not through the ages one increasing purpose runs, ,,
And the thoughts of men are widened with the process of the suns"

Dr W H Sparling, of Moweaqua, read a paper entitled

FETAL HYDROCEPHALUS

The author reported two cases The first patient was the mother of eight children, all of whom were living and healthy Having attended her during two previous confinements and knowing her to be unusually expeditious, he did not apprehend any difficulty in her case The child lived for about half an hour from the time of its birth The mother made an excellent recovery

The next case occurred in a woman, 25 years of age, who had been in labor for about twelve hours This was her fourth confinement in less than four years All of her former labors had been normal

The cases are both interesting on account of the rarity of the malformation and the difficulty usually attending labors so complicated La Chapelle's statistics show only 15 cases of fetal hydrocephalus out of 43,545 labors, but Merriman gives 1 in 900

The question as to what can cause this disease during fetal life would be an interesting one Tubercular meningitis being out of the question, the most reasonable supposition would be that it is an unnatural secretion of cerebro spinal fluid, which pressing upon the bony walls of the cranial vault arrests their development, this affording ample scope, under the more yielding soft coverings of the head for the formation of a tumor of very large size The deformity is quite frequently accompanied by spina bifida, as in the author's second case, which might indicate a want of proper development in the bony walls of the cranium and spinal column as encouraging the excessive secretion, and so being the original cause The head may assume an immense size, cases being on record where it measured twenty-five to thirty inches in circumference

Dr W C Bowers, of LaPlace, read a paper entitled

OBSERVATIONS ON SOME FORMS OF PUERPERAL DISTURBANCES, WITH CASES FROM PRACTICE

Hemorrhage, septic infection and inflammatory troubles in the puerperal state are often so closely associated, so dangerous to life or in any case to future health, and arise so unexpectedly at times that it behooves the physician to be prepared and alert in every case of obstetrics The placenta is, in some instances, so roughened that it is nearly impossible to determine whether or not a fragment is left in the uterus and in such cases he had always waited for evidence of such retention, in the form of unnatural hemorrhage, or the passage of small fleshy looking masses with pain and unsuspicious bleeding In every case his best endeavors are made to leave no part of the secundines in the uterus by reason of a faulty delivery of them The author's manner of causing their expulsion is by grasping the uterus through the abdomen with one hand and pressing firmly but gently in the direction of the birth canal, varying the direction of pressure within certain limits until he feels the tumor descending At the same time gentle traction is made on the cord with the other hand in amount which would be slightly more than necessary to lift its possible weight, taking all the time necessary for its gentle delivery, after which it is carefully inspected He then gives the woman a drachm of ergot, has the patient and her bed made clean and dry, a binder comfortably applied, and allows her to assume any reclining position in which she is the most comfortable He believes it a good rule, and adheres to it, not to leave the confined woman under one hour from the birth of the child and not then, unless her condition is good Remaining with the patient this length of time insures good contraction of the womb and removal of clots from the birth canal, should evidence of their presence arise, thereby lessening the danger of any disturbance later in the puerperium The author then detailed the histories of two very instructive cases and outlined the treatment

OBSTETRICS IN A COUNTRY PRACTICE

By Dr C M Noble, of McLean The country practitioner must necessarily on account of circumstances be a specialist in the various branches of medicine How well he may succeed in his efforts is quite another matter In this day of asepsis the specialist on obstetrics would be very cautious about handling any case which might in any way bring contamination to his maternity patient It is the author's plan to thoroughly disinfect himself by scrubbing his hands and arms, and washing with disinfectants as if he were going to do an abdominal operation The finger nails should be thoroughly cleansed and scrubbed with brush and soap The arms of the operator should be bared and the coat and vest removed The author believes that in the matter of obstetrics that there is no one thing that is less understood by the laity than sepsis It is astonishing the amount of ignorance displayed by many people as regards this point, and it seems to him we have no more serious question to deal with Every obstetrician should impress upon the minds of his patrons the necessity of perfect cleanliness, and teach them the manner by which septic poisons are many times communicated to the parturient woman

Dr A C Cotton, of Chicago, read a paper on "Early Care of the Infant"

Dr Ellen H Heise, of Canton, followed with a paper on

THE TREATMENT OF ARRESTED GROWTH IN CHILDREN,

in which she reported cases showing the practical application of the principle that, other things being equal, the horizontal position favors increase of stature in young people In the case of a healthy young girl, who had remained about the same height from her tenth to fifteenth year, she induced the mother to put her to bed for three months, only allowing her to sit up for a few minutes at a time but otherwise making no changes in her mode of life She had not the measurements in her case, but the girl had the satisfaction of outgrowing all her clothing, and by insisting on her passing several extra hours in bed each day for the next two years she gained the height of her mother and was satisfied In another case a healthy boy of 16 years of age, the son of tall parents, the height was fifty seven inches, while the arm extension was two inches more There had been no appreciable growth for about six years The horizontal position, continued for three months, resulted in an increase of three quarters of an inch in height, and Dr Heise confidently believes that the removal of longitudinal resistance to the growth of the skeleton will prove amply advantageous in those cases in which normal growth is too early arrested

Dr J L Covey, of Lexington, read a paper on

THE CARE OF THE PARTURIENT WOMAN

To act intelligently the physician should be able to recognize the physiologic limits of the symptoms resulting from labor He believes in the care of the puerpera that the physician will have done his whole duty when he surrounds his patient with those conditions where nature has the least opposition in her reparative processes Consequently a warm dry bed and perfect rest will be the first things he will secure for her The child should be kept out of the room for several hours The room should be darkened and the patient allowed to sleep No one should be allowed in the room but the nurse The air in the room should be kept pure and at an even temperature Cleanliness in all instances should be rigidly enforced Unless the lochia becomes putrid, or there is dryness and soreness of the genitalia, he does not believe that frequent injections are necessary The external parts should be bathed with a warm antiseptic solution, and should the secretions become putrid or the vagina become dry and tender, warm carbolized injections will not only destroy the fetor, but give great comfort to the patient The patient should be directed to empty the bladder during the first twelve hours and failing to do so, should be catheterized Diet must be light for several days and should be selected according to the requirements of the patient Not later than the third or fourth day the bowels should be evacuated As to the time when the parturient shall leave her bed, the author's rule is to keep them in bed for two weeks and not allow any active exercise for six weeks longer Lacerations of the perineum will occasionally occur in the practice of the most skilled accoucheur, and he closes them immediately after labor or within twenty-four hours

ENDOMETRITIS

A paper on this subject was contributed by Dr S M Wylie of Paxton After defining endometritis the author said the earlier the cases are recognized and the more energetic the treatment within certain limitations, the more satisfactory the results will be The preliminary treatment by hot douches, boro-glycerite, cotton tamponade or icthyol glycerine, 20 per cent on wool tampons, giving support to the uterus and ovaries, taking off tension from the uterine ligaments and by pressure as well as exosmic influence, removing plastic products about the uterus and supporting pelvic vessels, will do much toward relieving the congestion and hypersensitiveness and lessen the dangers attendant upon the more radical measures necessary for their relief which is, first curettage, which offers the best treatment at our command After thorough curettage, the application of pure carbolic acid to the entire cavity is used, or the gentle injection of fifteen or twenty drops of compound tincture of iodin, with a Carl Braun syringe, following this with a thorough uterine irrigation with sterilized water or a 1,000 aqueous sterile solution of iodin without the previous application of the carbolic acid or iodin

The general treatment of these cases after the immediate causes have been removed consists in keeping the bowels unloaded, administration of proper food that will be easily digested and assimilated, bathing massage and a free use of water internally for drinking to flush out the sewer gates and unload waste tissue products Uterine drainage should be regarded as of the first importance and the author uses iodoformized gauze in all acute septic cases for packing the uterus, as well as in the chronic cases, where repair of the cervix has not been performed Curettage should be accompanied by a repair of both the cervix and perineum if torn Dr Wylie has no faith in so called intra-uterine medication in this class of cases with mops or applications of acids, astringents and other medicines

Dr J A Freeman, of Millington read a paper entitled

THE INTRA UTERINE REMOVAL OF MULTIPLE MYOFIBROMATA,

in which he said, after referring to the various methods for removing these growths, that tumors as large as medium sized oranges, which grow outwardly, or subperitoneally, and which have but a thin, if any, muscular external covering, can be successfully removed via the intra-uterine passage He had in several instances removed quite large ones successfully by that method He showed fifteen small tumors which he had removed at one sitting from a patient from whom he twelve years previously, dispersed or caused to shrink to a size so small as not to be felt, a tumor as large as his fist by electrolysis and which never grew again After this tumor had disappeared he found two other (smaller) ones growing which he caused to project internally into the uterine cavity by injections of ergot and the internal administration of the agent, and finally removed them He raised the question, Is it not best to remove these tumors via the intra uterine and vaginal canals in all cases in which it can be done, thereby leaving the patient without any subsequent annoying adhesions, and capable of performing all of the functions natural to a perfect woman?

Dr O B Will, of Peoria, read a paper on

SOME GENERAL CONSIDERATIONS ON DIAGNOSIS IN GYNECOLOGY

He first called attention to the great desirability of devoting a larger proportion of time and effort to the attainment of diagnostic skill, and, also, to the end of studying more closely the actual state and condition of the local system, as well as its individual organs, under circumstances of apparently perfect, or approximately perfect, general and local health The author then briefly presented the essential features of three cases in illustration of his point of support, which served rather to suggest a lack of attention to diagnostic landmarks and careful scrutiny, than downright ignorance, but viewed in either light they are rife with information and lessons of a practical character, in that they evidence the necessity of careful, thoughtful diagnostic skill as the very basis of a valuable reputation and a successful therapy In the diagnosis of gynecologic affections as of those of other systems of the human economy, the object is to determine the kind and degree of departure from the normal anatomical and functional attributes of the several organs, and their relationship to each other, without the involvement of serious disturbances

In conclusion, Dr Will said we should aim at an accurate and decisive diagnosis in all cases To that end we should study well the attributes of normal structure, form, position and association To the right minded physician no difficulty need be experienced in securing opportunity We should use all the means at our command, both natural and artificial, bearing constantly in view the ideal method, embodying preservation of tissue integrity and obedience to the aseptic and antiseptic principles of the age and time

Dr Casey A Wood, of Chicago, read a paper entitled

FOREIGN BODIES IN THE EYE

The responsibility assumed by the surgeon who undertakes the care of an eye whose envelopes have been penetrated or ruptured is greatly increased by the fact that not only the vision of the injured eye but that of the second eye may be at stake The dreadful possibility of sympathetic or migratory ophthalmia should always be borne in mind This disease runs such a chronic and painful course and is so disastrous in its effects that when once encountered it is never forgotten It was not the author's purpose to weary the members with a discussion of certain theories respecting the pathology of ophthalmia migratoria but rather to indicate some of the principles commonly regarded in dealing with certain ocular injuries and to illustrate these with some cases that had come under his own observation First of all ocular traumatisms may be empirically, but, he thinks, usefully and practically divided into three classes 1, those that are serious or not from the standpoint of sight only—where we are mostly concerned in asking whether or not the patient is likely to have useful vision in the injured organ, 2 those that threaten the integrity of the second eye whose vision may at the time be fairly useful Here the eventual vision of the injured eye must be subordinated to the protection of the fellow organ, 3, those cases, probably the most numerous, in which sight is destroyed in the injured eye and anxiety may be felt in respect to the vision of the other eye

The author then reported the histories of three cases which belonged to the first class As examples of the second class he also briefly detailed the histories of three cases Of the third class, he gave but one example, and said that injured eyes of this class should always be removed

As an aid to prognosis and treatment, he suggested the following rules

1 As long as the wound heals without difficulty and no

sympathetic irritation persists I would treat with rest and antiseptics and would not remove any eye whose injury is confined to the cornea, iris and lens

2 I would not enucleate an eye containing a foreign body where the injury confined to the tissues of the foreign body, could be removed

3 I would not remove an eye containing a foreign body if there was no injury in the ciliary region, and the missile had passed through the posterior wall of the globe

4 I would not immediately excise an eye injured by small shot (which are usually aseptic missiles) even if the wound were in the ciliary region, provided the patient could occasionally be seen by an oculist

5 I would always excise an eye that contains a foreign body that could not be removed

6 I would excise an eye in which the ciliary body had been injured, even if the sight were not much affected thereby The only exceptions I would make to this rule are small gunshot wounds, in cases where the second eye is useless or had been removed, and those instances in which there is no continued uveitis of the injured eye, provided always that the patient could be frequently seen by an oculist For the average man, however, excision or exenteration would be by far the safest procedure in the last instances Where loss of sight goes along with ciliary involvement there can be no argument in favor of retaining the eye

7 When once ophthalmia migratoria has set in, it is wise to retain the injured eye if there be any sight in it, as eventually it may be the better of the two

8 It is safe and proper to remove all tender and inflamed eyes of adults where vision has been lost from a penetrating wound in whatever region of the globe

9 It is highly desirable to retain the eyeball in patients under 20 years of age, if it can be done with safety to the better eye, since earlier removal of the globe retards the growth and development of the corresponding orbit and greatly alters and mars the facial expression

(To be continued)

American Electro-Therapeutic Association

Fourth Annual Meeting held in New York Academy of Medicine, New York, Sept 25, 26, and 27, 1894

WILLIAM J HERDMAN, M.D , President

(Continued from page 809)

DR NEWMAN LAWRENCE, M I E E , read a paper on

HYDRO-ELECTRIC METHODS, PHYSICS AND APPLIANCES

INTRODUCTION

The term "hydro electric methods" is, I take it, but a sort of modern glorified edition of the old-time "electric baths" The advantage of its adoption seems to lie mainly in the fact that it offers to the lay mind a halo of obscurity through which there is little chance of recognizing any connection with so common and so medically-despised a "method" as the electric bath

Judging from what I have seen and heard, the medical profession have very little respect for electric baths in America, and are content, for the most part, to leave the administration of them to the attendants of Turkish baths and similar institutions, regarding the whole business as either a fad or rank quackery

Looking at the matter as an electrician, it seems to me that electric baths and especially modern developments now designated hydro electric methods are worthy of better attention and study For, if it be granted that physicians sometimes wish to place their patients under electrical influence, either local or general (and the very existence of this Association proves this to be the case) it is certain that one way by which this may be done is by electricized water and accomplished by it, moreover, in a manner widely differing from other "methods," as to physical conditions

Where physical conditions differ, it is reasonable to suppose that physiologic and pathologic resultant influences may differ also, therefore, without in any way trenching upon the therapeutic value of these methods, it may be advantageous to consider briefly some of the physical conditions and problems of hydro-electric therapy

The questions here dealt with, in accordance with the request of your Secretary, are those relating to the use of constant current only, thus it is manifest that it will be impossible to avoid going over some ground which is also common to the use of other forms of current

The subject seems naturally to divide itself into the following heads

A Apparatus required
B The current employed
C The methods
D The patient (considered electrically)
E Problems

And I will ask your attention to each in turn, for a few moments To consider them fully would take more time than lies at my disposal but I have endeavored to set forth an outline, based upon broad principles, fundamental facts and practical experience, which may prove useful in assisting any member of this Association who desires to turn his attention to the subject

A —APPARATUS

A bath tub of porcelain, slate or wood, or perhaps of compressed paper—any way, of *non-conducting material*, if it is intended to use it for dipolar baths The German pattern of bath tub is of oak, ovoid in shape, four feet ten inches long and two feet six inches wide Height at head, one foot eleven inches, at foot, one foot five inches I have found in practice that the tub may be conveniently a few inches longer and three or four inches narrower

Electrodes in the German baths are fixed in various positions and communicate with a switch board by means of wires or conducting rods passing through the sides of the tub This perforation for conductors in the sides of the tub always seems to me a source of weakness However carefully connected, they often leak water sooner or later and, when once fluid leakage commences, electrical leakage can not be prevented I much prefer electrodes which may be placed in the water in any position required and connected by insulated wires to terminals outside the bath tub These, if of suitable size, may be made to answer all the purposes of the fixed German electrodes and entirely obviate the objections above referred to An adjustable band of strong webbing to support the shoulders when the patient reclines in the bath, having leather straps and buckles or loops and buttons to regulate its length, is a convenient adjunct to the bath tub

Of electrical apparatus, besides the battery or other source of supply, a switch board, a cell collector or rheostat or both and a milliampère meter reading up to 300 milliampères are necessary

I have dealt more in detail with the electrical apparatus under the head of "current employed," but it may be well to state here that any such apparatus used should be of the best description It need not be elaborate but it *must be good and reliable* Such apparatus may be rather costly, as regards first outlay, but once purchased and properly installed it will outlast several sets of inferior quality besides being throughout far more satisfactory to work with

B —CURRENT EMPLOYED

This, by the conditions of our program must be what is known as constant or continuous current, but the source of supply may be either a battery or a dynamo or as drawn from the street lighting mains If a battery be used it must be of sufficient power, *i e*, it should consist of 40 to 60 cells having an E M F of not less than 1 volt per cell, and these cells should be of fair size Three pint or two quart Leclanche cells will do very well or any similar simple kind of cell, but complicated and not-get-at-able makes should be avoided If larger cells are available, they may be used but it must not be overlooked that the size of the cell does not determine its E M F , and therefore no increase of size will do away with the need for a number of cells At least 40 of any kind are needed, be their size great or small, but large cells possess more current capacity and therefore will *last longer* in proportion to their size With a battery the means of control are generally either a cell collector or a rheostat or a combination of the two

All control should allow of very gradual increase and decrease of the current A cell collector therefore should not switch on more than two cells at a time Even these small stops must be made without sudden jerks or the least semblance of shock to the patient in the bath, and this is extremely difficult to obtain in a cell collector I have tested many and can not say that I have found one which satisfactorily overcame the difficulty

A rheostat, on the other hand, of sufficient power, put in circuit with all the cells, becomes in this respect a perfect controller but is open to the objection, recently brought forward, that current passed through it is *more painful*, because all the E M F of the battery passes to the patient, the total energy administered (for an equal current supply) is greater and hence more pain may be produced To what extent this objection holds good I am not in a position to say, but should expect it to be somewhat counterbalanced by the therapeutic advantages of the increase of total energy, while at the same time it is obvious that less current supply may be used and so the total energy made the same as it would be with greater current supply and lower E M F

A combination of both cell collector and rheostat is sometimes recommended, and may be made to obviate both the difficulties above referred to, though its use is somewhat complicated and in the hands of an ignorant or careless operator may be distinctly dangerous As an illustration of the latter point—suppose the cell collector acts by 10 cell steps and the rheostat controls within such steps it will be necessary to move the rheostat switch so as to put in much more resistance previously to switching on ten more cells in order to prevent too great an influx of current supply A double process of switching which could very easily be muddled so that the patient receives a severe shock

Dynamos—In institutions, hospitals and other large establishments having their own electric plant for light and power the current so generated may be employed for hydro-electric purposes, provided proper precautions are observed to prevent accidents On no account should it be considered safe to pass such currents direct through a bath with a rheostat only in circuit The currents used in the dipolar bath are large (sometimes 200 or more milliampères) and their sudden break or increase might have very serious effect upon the patient There are, however, controllers in the market which are much more than simple rheostats and in accordance with a suggestion, first made I believe by Dr W S Hedley, of Brighton, England, in the *Lancet*, April 9, 1892, include a special safety automatic cut out and a *shunt circuit for the patient* The shunt or divided circuit is a very important safeguard, for, by the suitable adjustment of resistance in the two arms, the current in the patient's circuit may be made any desired proportion of that in the main circuit, and the automatic cut out effectually prevents the passage of any greater current than the maximum to which the apparatus may be set for the time being

M Gaiffe of Paris, has introduced a controller based upon the divided circuit plan which is very simple To the best of my recollection, it consists of two arms of moderate resistance upon which move sliding contacts forming the terminals of the patient's circuit By adjusting the contacts the E M F of the patient's circuit may be anything from 1 or 2 volts up to the full voltage of the supply

Street Mains—In using the current from the street supply mains the methods of control are those given for use in institution installations The two cases are almost identical and though the E M F of the supply may differ, yet it would in all cases be greater than that required for hydro-electric application and therefore would have to be controlled

General Precautions—In all electric bath installations it is absolutely necessary to pay great attention to insulation of all leads and conductors Water is a fairly good conductor and metal pipes are excellent conductors Where electric light leads are about, in the same building, it is very common to find an "earth" or 'ground" more or less marked, the consequences of which *may be very serious* I have seen a patient, when in the electrical water, receive quite a shock on touching one of the water taps that supplied the bath, and this though on careful testing it was found that the insulation of the bath installation itself was perfect In order to obviate this risk I recommend that the water taps and any others in metallic connection with the earth be placed so far out of reach that no person can touch them when in the bath or, if they must be near, that they be made of porcelain or glass, or at least well coated with some insulating substance Damp woodwork whether of wall, floor or bath casing is a fruitful source of electrical leakage, the *dry wood* is in most cases a sufficient insulator All switches controllers measuring instruments, etc, should be placed well out of the range of splashes and may be advantageously protected by a box with glass case front

C—METHODS

These may be dealt with under two heads, dipolar and monopolar The older forms of electric bath seem to have been, with little, if any, exception, administered with both poles in the water Hence the name, di polar There are varieties of the dipolar bath in which one of the electrodes is brought into contact with the patient's skin and which therefore may, to some extent be called monopolar, but it seems to me more correct to class all methods as dipolar where the electrodes are *placed under water*, no matter whether they be also *in contact* with the patient or not It follows that monopolar baths or methods are those in which only one electrode is placed in the water The electric douche may be either dipolar or monopolar, but it is more generally the latter

Dipolar—The dipolar bath consists in the complete or partial immersion of the body in some conducting fluid, usually water, and the passage of a current through the composite conductor fluid and body, by means of electrodes immersed in the fluid and generally kept apart from the patient's body Sometimes one or both of the electrodes are made to touch the patient, while still kept under the water, with the idea of concentrating the lines of force at a given spot

Monopolar—In this form of bath, one electrode only is used in the bath water and the other is placed upon some part of the body not immersed By this means either pole may be made the more active by concentrating the current at the non immersed pole and widely diffusing at the immersed pole For instance, if a patient be sitting in a bath-tub full of water and one electrode be placed in the water and the other attached to his shoulder, the current will be diffused more or less over the whole of the immersed portion of the body but the entire current be it great or small, must pass through the shoulder under the other electrode and is therefore concentrated upon an area many times smaller than that of the immersed body

The monopolar form of bath may be used under circumstances which preclude the dipolar, for, while the latter requires a bathtub of considerable length and depth, the former may be efficiently administered with a sitz bath or even a good sized basin and a sponge A little water in the tub or basin covering a plate electrode forms the diffusing pole and the sponge, duly connected electrically, makes a convenient concentrating electrode The patient sits or stands, as the size of the vessel will permit, while the sponge electrode is applied to such parts as need the special localization of current or is passed gradually over the whole body so that each part, in its turn, receives the stimulus of localized current It will be readily understood that both forms of bath are capable of many variations to suit special cases The general conditions only are here referred to

The Douche—For a long time it was doubted, in England at any rate, if electric currents could be administered to the body by means of fluid douches in any other form than in one strong jet or stream I remember having some correspondence with the late Dr W E Steavenson, Physician of the Electrical Department at St Bartholomew's Hospital, London, on the subject, and in offering to prove to him that, with a properly constructed rose or sprinkler, electrized spray might be obtained Unfortunately, the early death of that distinguished and careful electro-therapeutist prevented the proposed demonstration Shortly after, however, I was able to prove the matter to Dr W S Hedley, with the result that some interesting experiments, which leave no doubt on the subject, are published in his admirable work on "Hydro electric Methods in Medicine" All that is necessary to insure that the water or other fluid is electrized when it reaches the patient is to have the nozzle so constructed that the jet or jets of water form *continuous streams* for a reasonable distance after they leave the metal conductor within the nozzle A little attention to the mechanical construction of the nozzles will secure this *Broken up spray will not* conduct the electric current any more than a broken up copper wire would do There must be fluid continuity if we would have electric continuity Dr Hedley[1] records that with a 2 inch rose nozzle having forty nine perforations, he was able to administer 5 milliampères of continuous current to a patient when the nozzle was held one inch from the body with plain water When salt was added to the water 7 5 milliampères passed over one and one-half inches with that particular nozzle, while with a single jet nozzle he passed 20 milliampères over eighteen inches With coil current the effects were much more marked, and when treated with a telephone in circuit showed the presence of current at very great distances

Measuring instruments, or at least current indicators, are a necessary part of any electric douche plant, for without them it is impossible to know to what extent the apparatus is working or even if it is working at all Speaking from personal experience and numerous observations, I think the douche application stands alone as a means of producing maximum concentration and localization of current with minimum pain It is essentially an instrument of precision and in skillful hands is capable of graduated and modulated effects through the widest range It is suited to internal as well as external applications and, owing to the perfect way in which fluids penetrate all the interstices of the orifices of the body and the electrization of the whole fluid, the electric douche forms a sure means of electrizing parts which could hardly be brought under the influence of the current by any other form of electrode

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[1] Hydro-electric Methods in Medicine, pages 48 and 44

I am strongly of opinion that the electric douche is worthy of careful attention and test by physicians, especially where internal electrization is required, and I look forward with pleasurable anticipation to the paper by Dr Cleaves, who I understand has found the electric douche a most valuable adjunct to other methods in certain cases

D —THE PATIENT, CONSIDERED ELECTRICALLY

It is manifest that the usual figures given for the resistance of the human body do not hold good when that body is immersed in fluid Roughly speaking, the greater the portion of the body immersed the greater will be its conductivity and the less its resistance, but other factors have this influence The body with dry skin possesses resistance several hundred times greater than that of plain water at ordinary bath temperature, say 95 degrees F The difference is still greater when medicated fluids are considered The resistance of the body rests mainly in the outer skin Consequently, if the body be immersed in either plain water or medicated fluid its resistance will be reduced almost immediately and after being well soaked in the fluid the resistance may be brought down to between three or four times that of the fluid Dr Hedley tested a patient under bath conditions, as nearly as he could imitate them, and found his resistance to be 540 ohms, while that of the water alone was 140 ohms It seems practically certain that the resistance of the body is always much greater than that of the bath water, and, even after several minutes soakage, is generally quite three times greater than the resistance of the water in which it is immersed From this it is manifest that it by no means follows that because a certain battery will pass a certain current strength through a bath of water before the patient is placed therein, it will pass the same current strength when the patient is in position It will do nothing of the kind, and this leads at once to one of the most interesting and complicated problems in electro-physics

E —IN A DIPOLAR BATH

Given a bath tub of water, of known resistance, with electrodes of a certain area and a patient of known resistance before immersion, what proportion of the current strength will pass through the patient when he is immersed in the fluid, and the current is passed from one electrode to the other (*a*) when neither electrode touches his skin and (*b*) when one or both touch him under water? Numerous investigators have sought a solution to the problem, but so far, I believe, without success, though some have arrived at what looks like a reasonable approximation The absence of an accurate determination is to be regretted for without it no reliable data for dosage in the dipolar bath can be established Dr Hedley, after elaborate and careful experiment, concludes that the body receives about 5 per cent only of the total current Steavenson and Jones previously stated in a broad manner and without giving any experimental data that the proportion is about one-eighth, but the mere bald statement of those last named can not be allowed to weigh against the very full and detailed investigation of the former Still I can not say that I accept Dr Hedley's figures as conclusive I have repeated many of his experiments, conducted others of my own, and tried in many ways to devise some arrangement for measurement which shall fully meet all the conditions, but there is so much that is varying and always variable that the x of the problem becomes a sort of hydra headed monster bristling with unknowns in all sorts of unexpected places For instance, though the diffusion of current in the water alone may be traced, and the lines of force mapped out with fair accuracy the presence of the body at once disturbs the lines and deflects them or at least many of them from their direct course This deflection and consequent alteration of the field might be calculated if the resistance of the body, when immersed, were known, but this, the key to the whole problem, has yet to be determined

Again, the presence of the body raises the level of the water and consequently in those bath tubs where large electrodes are fixed, causes increased electrode surface to come in contact with the water Thus another disturbing element is introduced Yet again, with constant current the conduction is electrolytic in the water, and more or less so, in the body This means counter E M F, and must assume appreciable proportions while the body resistence is being reduced by soakage

The only way in which this problem can be solved is, I think, by means of specially constructed apparatus wherein the body and the fluid could be studied separately without being separated more than momentarily Such apparatus I have not yet been able to secure, though I do not think it would be difficult to devise In the meantime, Dr Hedley's figures form a useful working basis and enable the physician to have some idea of the proportion of the current which reaches his patient

Another interesting question is that connected with what are termed local dipolar applications, i e, bringing one or both electrodes into contact with the patient under water If the patient was a better, or even as good a conductor as the water, doubtless much useful concentration of current might result, but, as the water has the lesser resistance the current from the electrode must to a large extent radiate outward through the water and away from the limb or other part of the body which it is intended to benefit Of course when a limb is just between the electrodes the field around it, and to some extent through it, must be stronger than when the electrodes are some distance away but may not this be compensated for or even overbalanced by the fact that the transverse resistance of a limb is far greater than its longitudinal resistance Having regard to these various points, it is clear that the dipolar bath is, physically, a very inefficient apparatus from the electrical point of view, because only a very small portion of the current used passes through the patient Therapeutically, however, dipolar baths have a good record, and many physicians are content to waste current in order to produce the special effects that experience tells them is beneficial in many cases

Monopolar baths, on the other hand, are very efficient, for all the current used *must pass* through the patient Electrically there be no waste in the process and, if reasonable attention is given to the insulation there will be practically no loss in the connections

It may be thought that I have, in this paper, given undue prominence to the difficulties connected with hydro electric methods, and so discouraged their adoption and development in America I have no intention of doing so, for, as I have more than once clearly stated in the paper, I believe that hydro electric methods offer to the physician electrical opportunities which can not be obtained by other methods and therefore I would do all I can to encourage their development It is to further this end, and not to hinder it, that I have given prominence to difficulties and dangers which it would be unfair to pass lightly over and which the true scientist will find pleasure in combating and overcoming

(To be continued)

A Case of Genito urinary Tuberculosis, presented at the *Berliner Verein fur innere Medicin*, Dec 10, 1894 Clinically, in addition to the manifest pulmonary and laryngeal phthisis, characteristic signs of genito urinary tuberculosis were present, and, in particular, the pathognomonic evidence, tubercle bacilli in the urine in abundance, and arranged almost without exception in little heaps and groups, as is peculiar to these bacteria in the urine Anatomically, a very interesting condition was presented, both in the very unusual intensity which the process attained in the affected parts, and in the limitation of the disease to one-half of the body from the bladder upward The left kidney was permeated by a series of abscesses with caseous contents The left ureter was converted into an immovable, rod-like structure, wholly degenerated from tubercle The bladder was a mass of ulceration, its surface strewn with caseous and chalky particles Tuberculous foci were found in the prostate, left seminal vesicle and left epididymis The right kidney and ureter had remained intact In the localization of the process in the left kidney, the case might be assumed as the rare descending type of genito urinary tuberculosis, but for the fact that the extirpation of the right epididymis was performed five years before, and vesical symptoms did not begin until long after —*Centralblatt für innere Medicin*

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SATURDAY JUNE 8 1895

THE ADMINISTRATION OF CHLOROFORM

Richard Gill, in the last volume of Saint Bartholomew's Hospital, has an article entitled "Notes on Chloroform Anesthesia," which, as it is based on large experience, will be read with interest In conclusion, Mr Gill asks the question "What is the best sign to be guided by, when chloroform is administered?" He comments thereon as follows

"This is a question which does not admit of a general answer, because different rules have to be obeyed during the induction of anesthesia, during long and short anesthesia, and also when alterations are made in the patient's position This much, however, may be stated concerning the induction of chloroform-anesthesia the pulse may be ignored, but the respiration must be assiduously watched How do we know that the patient is unconscious? By the alteration which the breathing undergoes , it is no longer controlled by the will , it has become automatic But the patient being unconscious, how do we measure the amount of chloroform which is safe for the purposes of continued anesthesia? By the size of the pupil Sometimes the pupil is large and sometimes small, when unconsciousness is induced The large pupil may mean narcosis , the small pupil is always the sure sign of safe anesthesia The small, contracted, or pin point pupil is, then, the measure of anesthesia, and is unquestionably the safest sign to trust , for during anesthesia, and especially during prolonged anesthesia, the respiration may become imperceptibly labored, and its new character may escape detection, the more particularly by inexperienced administrators

"But while the breathing is becoming impeded, the pupil is slowly dilating and losing its sensitiveness This change in its character indicates that the extreme limit of anesthesia has been exceeded The stage of narcosis is entered upon, and it is the pupil, not the respiration, that has given the signal When the patient's position is altered, as from the supine to the lateral, the breathing becomes obviously changed To rely entirely on the respiration would, in this new condition, lead to a return of consciousness Here the pulse is of use in determining the right amount of chloroform Is the pulse of no further service? Undoubtedly In prolonged operations it is the first to give signs of depression, and must be watched with care and attention, so that when it begins to fail, those means may immediately be put into action which are best known to maintain the flagging energies of the patient It is thus collapse is anticipated, and, if not prevented, in some degree mitigated "

"LOIMOGRAPHIA," A DESCRIPTION OF THE GREAT PLAGUE

The Epidemiological Society, in its current thirteenth volume, has a contemporary sketch of the London Plague of 1665 This valuable paper has been rescued from the hidden riches of the British Museum, at the instance of Dr Joseph Frank Payne, the late President of the society named above

The historian was Mr William Boghurst, an apothecary, who sold drugs at the "White Hart" shop in the parish of St Giles in-the Fields The manuscript was prepared for the printer, but it was either not printed or was consumed in the great fire, as were many other newly issued works

Boghurst was something more than a book-making apothecary His book speaks of his independence, his skeptical analysis of current theories, his personal investigations at the bedside, and philosophical vein withal He says of his undertaking to write on the Plague that there were many persons able to do the work better, "who might have saved me the trouble, and have done it better, especially if they had not been timorous, and like Foxes in a storme, run to the next borough "

The author traces the Plague to cases that had existed in London for three or four years prior to the great prevalence, rather than to a recent importation from Turkey through Holland, as is asserted by other writers He recounts some of the numerous explanations of the rise and progress of the disease, rejecting not a few as fanciful and as drawn from a lack of actual observation Of himself he says "I have writt nothing from hearsay, or from bookes, or from the testimony of others, or of my own conceit, but all and only from experience and triall "

The diversity of causes he locates in the "fæces of the earth, and it always arose *ab infra et non de supra*" by a fermenting action "extracted into the Aire by the heat of the sun and difflated from place to place by the winds" Of the post-mortem appearances of the disease he has little to say, for he was too busily occupied with his large practice among the pest-stricken ones to have time for that line of inquiry He places much dependence upon the record of the pulse of the sick, and sat for considerable periods at a time holding his patient's pulse Of his treatment the editor has taken much pains to give the palliatives, poultices and plasters upon which Boghurst relied That the latter was not bound up to a routine of practice may be seen from his saying that "one way of Cure will not serve for all, but wee must doe as contingencyes doe divert us By continuall following of one course, occasion is given to every Mountebanke, tradesman and ignorant Old Woman to practice The Good and the Bad fared all alike, and if any fared worse, I thinke it was the Good" He notices the presence, and in certain patients the intercurrence of spotted fever

The increase of vermin, meaning rats, is noted by the author, a condition paralleled in the late plague in the Chinese cities, with this difference, that our modern interpretation of the phenomenon implies that these animals leave their haunts and come to the surface to die

Of the "Prognosticks" of the Plague, upon which so much concern and intellect—in the field of fancy and panic—were expended, Boghurst writes but briefly His own time being occupied with bedside work chiefly, he was not led away by "other men's weake observations" He contents himself with a general confession of ignorance in scriptural phrase "I think," says he, "it may be said of the Plague as is said of the Wind, that it bloweth where it listeth, and we heare the sound thereof, but know not whence it came nor whither it goeth"

The word "Loimographia" has an unaccustomed look, but it is recognized in the larger lexicons as one referring to "a description of the Plague and other infectious diseases"

THE TREATMENT OF FRACTURED PATELLA

Which is the best or most successful procedure to adopt in treatment of fractured patella, is a question which has been frequently discussed, but which still remains unsettled The reasons for this are not attributable to any fault on the part of surgeons, notwithstanding the proverbial difficulty about doctors agreeing, but they are inherent in the very nature of the clinical problem This was recently very well illustrated in a discussion by the Section on Surgery of the College of Physicians of Philadelphia At the meeting held April 12, Dr J William White presented three cases in which brilliant results had followed Barker's operation All of them were in adult males, engaged in mechanical pursuits, who had received simple transverse fractures of the patella All were confined to bed only a few weeks, two had left the hospital and returned to work inside of two months and one in eleven weeks from the time of injury The method of Barker, as described in the *British Medical Journal* (Feb 27, 1892), is to encircle the patella with a vertical, antero-posterior silk ligature which, when tied, holds the fragments firmly together The operation is done subcutaneously and the ends of the ligature are cut short The original operation was slightly modified by Professor White

Mr Barker uses a long needle, which enters the tissues below the patella and passes through the tendon, or ligamentum patellæ, into the joint, and being carried upward behind both fragments emerges from the tissues above the upper fragment A stout, twisted silk ligature is now threaded through the eye at the point of the needle, and is carried downward behind the patella The needle is then re introduced into the lower opening and carried upward again, but this time in front of the patella, now being brought out at the upper opening, it is again threaded so as to carry the other end of the ligature down in front of the patella and out of the lower opening The fragments are then approximated carefully and the ligature tied with a surgical knot, the ends cut off short, and antiseptic dressing applied

Professor White always makes a puncture with a knife, so as to secure an opening through the tendon large enough to discharge clots of blood and serous fluid, before introducing the needle, thus reducing tension and favoring early repair, by drawing off the effusion from the joint

In the discussion which ensued, the admirable results in the cases submitted were fully acknowledged The reporter was complimented upon the complete restoration of function, and upon the reduction in the length of treatment Most of the Fellows who examined the cases thought that the union was bony, others considered it ligamentous, but all agreed that it was firm, and that the results could not be surpassed by any other method of treatment

In opening the discussion, Prof John Ashhurst Jr, said that a good deal of stress should be laid upon the character of the injury in speaking of the treatment for fractured patella, since a fracture of this bone in one case is not the same thing as a patellar fracture in another case He laid especial stress upon the point of diagnosis whether or not the injury is limited to the patella If the lateral ligaments are torn, or other structures of the joint injured, the consequences are quite different from a simple fracture The functional importance of the patella (which is only a sesamoid bone) has been greatly exaggerated If there are no complications, walking is not made impossible, as is generally thought to be the case

patella be broken by direct force, and there are
nplications, the disability is very slight, and the
it retains the power to extend the leg as well as
l before receiving this injury After excision
patella, in gunshot wounds, the function of
adriceps tendon and movements of the limb
eserved The patient can walk, but does not
because it hurts him He concluded that a
many cases of fractured patella will recover
ave very useful limbs, without special care
vn experience had been that, in simple fracture,
patella, in the great majority of instances, a
ictory result will be obtained by the ordinary
sual methods of treatment The matter of
ition of the fragments may mean very little of
quence, since there have been cases with several
s of separation and yet the patient had not been
nted from walking about and attending to the
ry duties of life, even when they are as active
se required of a sailor in going up aloft This
ause the fibers of the quadriceps tendon are not
n When this complication occurs, the disabil-
more marked, and surgical intervention becomes
sary He preferred mechanical methods by
ts, a fixed dressing and rest in bed, when more
ded he would give the preference to those meth-
hich do not open the joint to those which do
e contention of Mr Jonathan Hutchinson, that
paration of the fragments has for its sole cause
ffusion into the joint, he considered just Since
perior fragment is forced upward by the effu-
nd not drawn up by muscular action, he said
all that is necessary to do, in order to secure
sition, is to remove the effusion by aspiration of
oint In the great majority of cases nothing
is needed than to apply splints and elevate the

A firm fibrous union is just as satisfactory
e patient as that obtained by any cutting meth-
and he was very skeptical about bony union in
of these cases Sayre's case was referred to,
h in the dry specimen appeared to be united by
, but after maceration for a short time, it was
d to be ligamentous The arguments with regard
ny union he regarded as misleading and theo-
al, the ligamentous union is just as good The
ility after fractured patella, Professor Ash-
st attributed not to inability to throw the limb
ard, but, frequently, to moderate ankylosis, owing
e fact that some form of apparatus is generally
for six months or more, and that, as a result,
e stiffness will result which, however, will subse-
ntly pass off by exercising the part He did not
rove of the use of Malgaigne's hooks, but spoke
rably of a method which consists in placing an
pressure pin transversely through the soft tissues
ve the upper fragment of the patella, and a sec-
one below the lower fragment, and uniting them with a ligature thrown around both pins in a circle, or ellipse

Dr Keen presented a patient, seen some time after the injury, in which the fragments had been so widely separated that they could not be brought together He had practiced the method of scoring transversely the lower surface of the quadriceps, suggested by Treves, but still could not bring down the upper fragment sufficiently He then adopted the novel expedient of lengthening the lower tendon by chipping off the tubercle of the tibia and allowing it to slide upward The fragments were then brought together and fastened with thick silver wire, the wound properly dressed, and the patient recovered with a useful limb

Dr G G Davis said that where swelling prevents the approximation of the upper and lower fragments, sometimes, by waiting a few days, the effusion will subside and the bone can then be held in place by adhesive plaster and bandages The interposition of fibrous bands might delay healing, but would not produce markedly deleterious results, and their influence in producing such results had been much exaggerated, in his estimation When the swelling does not go down promptly, he advocated tapping the joint and irrigating with normal salt solution If necessary to hold fragments in apposition, he would use Malgaigne's hooks, in preference to the passage of silk through the joint, a perilous procedure, as we know that it is impossible to disinfect the lower layers of the skin If a stitch abscess may occur then there is liability of the infection being carried by the silk into the joint The good results obtained by Dr White are attributable to the fact that, after the fragments are secured, early passive motion can be instituted Championniere aimed at the same result by the use of wire, and Dr Davis suggested a modification of Malgaigne's hooks, having the same object in view

Professor White replied to his critics that he had not seen any results from what has been termed the old-fashioned treatment, which would at all compare with those he had obtained by the Barker operation, and the same claim has been made by others who have performed it Instead of the patients wearing apparatus for months or a year after the accident, his patients had returned to their work in two months without any form of splint or support whatever, and have perfect use of their limbs He did not attach much importance to the question of bony union, as he was more interested in clinical results than in museum specimens The shorter term of rest in bed and retention in the hospital, is a matter of great importance to a mechanic, and the ability to return to active industrial pursuits in a couple of months was to him the most striking result of this method of treatment

The above summary of an able discussion of the treatment of fractured patella contains some novel recommendations as to the management of these cases, but is especially interesting from the lucid explanation of the impossibility of surgeons coming to an agreement upon the method of managing fractured patella, considered as an abstraction, whereas when confronted with a given case, or cases illustrating simple and complicated fractures, there might be less difficulty in indicating the proper course to pursue Not only are the pathologic conditions, or the results of traumatism to be considered, but the many modifying factors in the person or the environment of the subject must be allowed to have due weight, just as in other surgical problems, in which individual cases are to be decided upon their own merits We agree with Ashhurst that fractured patella in one man is not the same as fractured patella in another man, and hence there can be no absolute and invariable rule of procedure in the treatment

WARFARE AMONG THE ADVERTISING "SPECIALISTS"

An advertiser of New York City, a "Doctor" H——, although he is a regular graduate in medicine, is a specialist "on the lung" After hunting the gulls of both country and city, he is now hunting one or more of his associates on the charges of forgery and larceny The men who kept his accounts and correspondence, and who did the pharmacal work, set up in business for themselves and diverted to themselves quite a large share of the out of-town receipts In the course of this crooked work it became necessary to work off a fraudulent certificate of death It was in the perpetration of this crime that the "doctor" got wind of the system of swindling of his associate "doctors"

That certificates of death should be received from the "doctor," and not from the other advertisers does not appear to have been explained, but it may be, for the *moment*, assumed that he is what the State Medical Society of New York has voted to harness itself with, namely, "a legal practitioner" Otherwise it will be difficult to explain how it came to pass that the "doctor" would venture to invite the law officers of the city to intervene on his account However, they have so done, and the grand jury has found an indictment against the partner, named W——, for forgery in the second degree His arrest followed and he was held in $1,000 bail, an amount that he was unable to obtain He was locked up in the Tombs His lawyer has claimed for him that he has a medical diploma from a Venezuelan university

The co-parcener in the fraud committed against the principal can not be found This co-parcener was the one who had the knowledge of accounts, addresses of patients, etc, being the better able to aid "Dr" W—— in establishing a "chronic department" under the nose of his employer Under this "department" they were able to fleece certain of the "doctor's" patients to the extent of $25 for the first month and $15 for the second month of pretended treatment All of which shows the gullibility of mankind, especially of the sickly half thereof

It does not speak very favorably for the medico-legal status of a community that permits such enterprises to bud, bloom and blossom forth so luxuriantly, and also permits the most flagrant end of the fraud to obtain quasi-support from the medical and legal authorities Has the New York County Medical Society or Academy of Medicine any grounds for action against these people?

SMUGGLED PHENACETIN

The firm of Schieffelin & Co, of New York City, has recently notified the Secretary of the Treasury of certain frauds upon the revenue Drugs made in Germany, like phenacetin and sulfonal, have been brought into the country through Canada and sold at a figure 20 to 25 per centum lower than the regular prices of the authorized distributing agents in New York

One druggist, hailing from Montreal, has been arrested and others in that city are on tenter-hooks in view of confessions said to have been made concerning the evasion of the revenue laws, which confessions are by two parlor-car porters, who have for years been on the Montreal "run" of two lines of railway One porter was arrested in Boston

The Treasury agents are said to be in possession of the names of numerous carriers and buyers of the low priced drugs The arrested Montreal druggist was put under bail of $2,500 When his case was called May 28, he did not appear and his bail was put in default

EUTHANASIAN HOME FOR NEW YORK CITY

Those who have followed the specialization of charities in London have been aware of the establishment in that city of a home for the dying It has something of an endowment and is limited to ten beds It receives those who are hopelessly sick and believed to be near to death's door

The *Evening Post* of New York has argued the advantages of such a home for that city, and it might be suggested if that paper is able to push the matter along to a successful end, that the name of the great poem of the late noble-minded editor of that paper—Mr William Cullen Bryant—be chosen for the institution, as a part of its title, that is, it might be called the Thanatopsis Hospital, or Home This would be better than the bald, rather repellant title, Home for the Dying

There are doubtless many cases of given up, non-medicable patients who would be vastly better off in such a home, where trained nursing, if naught else, might be given to assuage the bitterness of a lingering death, than they could be in their own homes Such an institution should be fully endowed, or not started at all

THE ASSOCIATION

One of our oldest and most valued members said the other day "Why do you keep constantly drumming for new members? Is not our ASSOCIATION big enough?" Why, bless your soul, dear fellow, don't you know that nothing keeps spirit, dash and enterprise in our work, like the missionary work the members have done and are doing to lift our brave body into the place it should occupy as the foremost organization of medical men, at once the most powerful for good to humanity, and helpful to the profession itself Of course it is a great ASSOCIATION, but it should be greater Let us work, then, as we never worked before, to secure, first, the *largest* membership, and second, the *best* membership Our ASSOCIATION to day has only about one third the membership of the British Medical Association We *must* work, therefore, in generous rivalry, until we stand first, instead of second, and that is why we earnestly urge every member to put forth his own effort to increase the membership

CORRESPONDENCE

The Kansas Hypnotism Case

MILWAUKEE, WIS, May 31, 1895

To the Editor —Some time ago the secular press published a statement to the effect that the Supreme Court of Kansas had recognized a plea of hypnotism as a defense in a trial for homicide Since then the statement has been reiterated, not only in a great many newspapers, but in some of the medical journals as well

The statement is entirely untrue The facts in the case are these one Gray incited McDonald, an employe of the former, to kill a man named Patton, also an employe of Gray McDonald was tried in the lower court and the defense sought to prove that Gray's influence over McDonald was exerted through hypnotic power and the judge of the lower court allowed the introduction of expert testimony to establish this fact McDonald was acquitted by the jury in the lower court, so his case did not reach the Supreme Court at all Gray was tried in the same court and convicted His case went to the Supreme Court on appeal and the judgment of the lower court was affirmed

In the case of Gray, no testimony seems to have been introduced relative to the subject of hypnotism Gray was convicted as an accessory Judge Allen of the Supreme Court wrote the opinion (May 2, *Pacific Reporter*, page 1050), and touched *only* four points, none of which had the remotest connection with hypnotism

An examination of the testimony given in the lower court in the case of Gray shows that McDonald, with his wife, lived in the same house with Gray while Patton, the murdered man, lived on a distant part of the farm Patton came over to Gray's house one morning and became involved in a quarrel with McDonald during which blows were exchanged Patton then left, threatening McDonald with future punishment After he was gone Gray told McDonald that Patton was a dangerous man, that he had killed seven men, and that he would "get some of us unless he were killed" He afterward took McDonald out into a field and instructed him in target shooting with a rifle They then returned to the house and Gray cleaned the rifle which belonged to him He then took McDonald into an ambush, gave the rifle and some cartridges into his hands, and left him to wait for Patton who was expected to soon pass near to the place of McDonald's hiding Gray returned to his house, but McDonald lay in wait several hours and when Patton was passing by shot and killed him

The case is entirely devoid of any suspicion of hypnotic influence It seems that McDonald was a man of very inferior intelligence and that fear for personal safety generated by the talk of Gray was his only motive in committing the deed It is not possible to account for the verdict of the jury which acquitted McDonald, without knowing the characters of the parties involved and all the local prejudices which existed at the time of the trial

JOHN MADDEN, M D

The Medical Profession and the Paris Exposition of 1900

SOUTH BOSTON, MASS, May 29, 1895

To the Editor —There is a matter which it seems to me ought to interest medical men universally and to which I have seen no reference made as yet

The Paris Exposition will be held in 1900 There, doubtless, medical science will be well represented Would it not be desirable to have this representation systematized so as to enhance its value?

I believe no grander exhibit of things medical was ever made than that at the World's Fair in 1893, and yet the medical exhibit, as such, was a failure I confidently assert that no doctor saw it all No medical editor with comprehensive mind gave even a synopsis of what was there to interest the practitioner desirous of being abreast with the times

I further assert that this failure to comprehend that exhibit was due to the defective manner of placing, or rather scattering the exhibit over the Fair grounds To my personal knowledge there were medical exhibits in the Electrical Building, in the Anthropological Building and several separate exhibits in the Liberal Arts Building—in the spaces assigned to various nations, and for the most part difficult to find

Why not have massed these separate exhibits together, so that the serried columns of facts, medical and surgical, should have irresistibly forced even the lay mind to comprehend the fact that medicine is a science and one of the greatest

Anent the Paris Exposition of 1900, my proposition is this *have all exhibits illustrative of medicine under one roof* Doubtless this result can be attained if the attention and interest of the proper authorities can be secured—for France likes system and simplicity is the essence of a good system

Do you deem the matter of sufficient importance, Mr Editor, for the representative medical journal of America to agitate?

Respectfully,

EDWARD A TRACY, M D

Dr Robert Koch and His Germ Theory of Cholera

DUNKIRK N Y, June, 1895

To the Editor —Dr Robert Koch has sought to explain the cause of certain diseases upon the hypothesis of the action of pathogenic germs invisible to the human eye Upon the microscopic examination of the stools of cholera cases, he found different forms and kinds of germs, and among these was one of comma-shape, which he fancied was the cause of this disease Through the process of "*culture*," and "*experiment*" upon the lower animals he asserts he has demonstrated that this germ is the actual cause of this disease So confident was he that this newly discovered, comma-shaped object was the cause of cholera that for several years he continued to assert with the utmost assurance that the presence of these comma-shaped bacilli in the dejections of a person suspected of having this disease, constitutes positive evidence that the case is one of pure *Asiatic* cholera

But this comma shaped bacillus theory of cholera has proved a failure These invisible comma-shaped germs are now found to be universal and harmless They are found in the secretions of the mouth and throat of healthy persons, and in the common diarrheas of summer everywhere—they swarm in the intestines of the healthy and are observed in hardened fecal discharges as well Dr Koch to-day asserts that these bacilli are universally present He even tells us that "Water from whatever source frequently, not to say invariably, contains comma shaped organisms"

Drs Pettenkofer of Munich and Emmerich of Berlin, physicians of high distinction and experts in this disease, drank each a cubic centimeter of "*culture broth*," which contained these bacilli, without experiencing a single symptom characteristic of cholera, although the draught in each instance was followed by liquid stools swarming with these germs

Dr Koch has kept *au courant* with the foregoing facts, as well as others quite as significant, and, had he accepted the evidences which thus year after year have been forced upon him, his pernicious cholera germ theory with its most disastrous consequences in misleading mankind would have been unknown to day HENRY RAYMOND ROGERS, M D

Mississippi Valley Medical Association

INDIANAPOLIS, May 27, 1895

To the Editor —Will you kindly mention in the next issue of our JOURNAL that the twenty-first annual meeting of the Mississippi Valley Medical Association will occur at Detroit, Mich, on Sept 3, 4, 5 and 6, 1895, and that assurances have been received from the railroad companies that one fare for the round trip will be the rate? Wm Pepper, M D, LL D, of Philadelphia, Pa, will read the Annual Address on Medicine on the evening of September 4 Dr H O Walker, of Detroit, the Chairman of the Committee on Arrangements, says that the local profession of that city is prepared to entertain the society handsomely, and the indications thus far point to a very large and successful meeting

Sincerely yours, W N WISHARD, M D

Mortality of Physicians

BINGHAMTON, N Y, April 29, 1895

To the Editor —Can you refer me to any article or table published on the mortality of physicians?

Fraternally yours,
J M FARRINGTON, M D

ANSWER—For complete list of works on the diseases and longevity of physicians see the Index Catalogue of the Library of the Surgeon-General's Office, U S A, vol xi, p 225 For the edification of our Danish scholars we mention the following Gjennemsnitslevealderen i den danske Lægestand i indeværende Aarhundrede, M C F C Bladt, Ugesk f Læger Kjobenh, 1879, 3 R, xxvii, 359, (which according to the "catalogue" means "concerning the duration of life of Danish physicians"

American Pediatric Society

HOT SPRINGS, VA, May 29, 1895

To the Editor —Our Society has passed the following resolution

Resolved, That in the opinion of the American Pediatric Society the evidence thus far produced regarding the effects of diphtheria antitoxin serum justifies its further and extensive trial

Yours,
SAMUEL S ADAMS, Secretary

BOOK NOTICES

Immunity, Protective Inoculations in Infectious Diseases, and Serum-Therapy By GEORGE M STERNBERG, M D, LL D Surgeon-General U S Army, ex-President American Publi Health Association, Honorary Member of the Epidemiological Society of London, of the Royal Academy of Medicine at Rome, of the Academy of Medicine at Rio Janeiro of the Société d'Hygiene, etc One volume, 325 pages octavo, bound in extra muslin, bevelled edges, uniform with the other volumes of the *Medical Practitioners' Library* Price, $2 50, in flexible morocco, $3 25

The uppermost topic of the day is that of serum-therapy and protective inoculations We have here a book by America's foremost bacteriologist, in which the question i impartially reviewed from a bacteriologic standpoint The book is divided in two parts, of which the first is given to natural and acquired immunity, and the second to protective inoculations and serum-therapy The diseases anthrax chicken cholera, cholera, diphtheria, foot-and-mouth disease glanders, hog cholera, hog erysipelas, hydrophobia, influenza influenza of horses, pleuropneumonia of cattle, pneumonia rinderpest, smallpox, swine plague, streptococcus infection symptomatic anthrax ("black leg"), tetanus, tuberculosis typhoid fever and yellow fever are separately treated

In regard to natural immunity, the author apparently makes good his claim to priority to the theory so well supported by Metschnikoff, of phagocytosis, but yields readily to the view that the leucocytes are probably not the principal agency in the destruction of bacteria in living tissues Buchner's demonstration that the ammonium salts, (any alkali according to Van Fodor) will increase normal resistance to bacterial invasion, is not accepted by the author a conclusive on this point, but as showing that the germicida constituent of the tissues, whatever it may be, is only soluble in an alkalin fluid

In regard to Haffkin's protective inoculations the autho says the results "indicate that these inoculations have a rea value, but that immunity is not immediately established and consequently that during an epidemic a certain numbe of fatal cases may be expected among the inoculated as well as among the non-inoculated" The author regards the evidence in regard to immunity from smallpox, as probably due to the presence of an antitoxin in the blood of the immune individual He cites his own experiments made a Brooklyn, and refers to Kinyoun's cases of injection of blood serum from an immune calf As would seem natural, the author having devoted much of his life to the study of yellow fever, he again takes up the Domingoes Freire inoculation for yellow fever, those of Finlay, and resuscitates the old experiments of Wm L de Humboldt made in 1854 and 1855 We note a clerical error in the translation of the letter of Dr de Humboldt to General Concha, in the original the numbe of cases inoculated by him in Vera Cruz was given as 1,438 not 1,458 as stated, (see Manzini, p 2) The bibliography a the conclusion of each chapter is valuable and complete

We welcome the book to our table, not only as a sound and safe counsel on the theories of the day, but as an instructive and useful summary of the literature of the subject

Saint Bartholomew's Hospital Report Edited by SAMUEL WEST, M D, and W J WALSHAM, M D Vol xxx London Smith, Elder & Co 1894

The editors of these reports usually succeed in making an interesting report, but they have been remarkably successful this time In addition to the routine reports of matter pertaining exclusively to the hospital there are twenty-six separate articles viz i, Aneurysm of the ascending part o the Arch of the Aorta, taking the natural position of the Heart, by Samuel Gee, ii, Primary Cancer of Pancreas by W P Herringham, M D, iii, Chloroform Anesthesia by Rich ard Gill, ii, Symphysiotomy by C Hubert Roberts, M D, x, on the Association of Cardiac Malformations, with other Congenital Defects, by Archibald E Garrod, M D, xii, Treatment of Senile Gangrene by R Cozzens Bailey, M S, viii, The Great Omentum, by W McAdam Eccles, x, Dietetic Value of Food Stuffs prepared by Plants, Rev George Henslow, M A, F L S, xii, History of Diphtheritic Paralysis, by J J Macan, M D, xiii, Diagnosis of Diphtheria, xiv, Diphtheria Immunity of Puerperal Women, by James Adams, M D, xv, On the Gradations of Health and Disease, by Harry Campbell, M D, xvi, Life and Works of Percival Pott, (the Wix prize essay for 1894) by Thomas J Horder, B Sc, xix, Treatment of Nævus by Electrolysis, xxiii, A Second Year's Surgery at Saint Bartholomew's Hospital, by Henry T Butlin, xxiv, Chronic Purulent Catarrh of the Accessory Nasal Sinuses, by W J Walsham, xxvi, Blood Casts in Phthisis, by Samuel West, M D, and reports of interesting cases, by E P Paton, Edgar Willett, H M Bowman, G C Garratt, D H Goodsell and Thomas Smith, and "Notes," by T Lauder Brunton, M D, F R S, and W J Horne, M D

The article of Mr Butlin is particularly interesting, as "in the last volume of the reports" he gave "an account of a year's surgery, during which" he "made the attempt to dispense with some of the rigid details of the antiseptic method, and showed how suppuration followed too frequently" This year the strictest precautions were observed and in consequence, the results were very much improved We will quote a paragraph from Mr Butlin which to our mind is well worthy of reproduction, as a caution to young dressers and assistants, not to overdo the matter of scrubbing

"Let me say that the active preparation of the skin which has been described is only suitable for the skin of hospital patients It is not only too vigorous, but wholly unnecessary for patients outside the hospital Indeed, in some of the hospital patients, a smart eruption was not infrequently produced which was sometimes pustular To say nothing of the discomfort which is produced by such a condition of the skin, I am not at all sure that it is more desirable to operate through the skin which is the seat of a pustular eruption, than it is to operate through skin which has been theoretically imperfectly prepared" While we are not prepared to go as far as Mr Butlin, there is no doubt that rough scrubbing is very frequently too vigorous

A great many of the articles have a permanent value and the volume well deserves recognition as one containing very much of enduring value

Pathology and Treatment of Diseases of the Skin, for Practitioners and Students. By Dr Moriz Kaposi Professor of Dermatology and Syphilis, and chief of the clinic and division for skin diseases in the Vienna University With 84 illustrations Translation of the last German edition under the supervision of Dr James C Johnston Pp 684 New York Wm Wood & Company 1895

No one can speak with more authority than Kaposi on any subject connected with dermatology, and in the opening chapter the author points out that the study of skin diseases means the careful study of pathologic processes, which are nearly the same in all parts of the body, and the study of these pathologic changes on the skin furnish a very convenient means of comparison with analogous processes in internal organs

There is a scholarly chapter on the history of the development of dermatology from the ancient to the most recent times, and then follow the fifty-three lectures which form the book

In speaking of lupus, Professor Kaposi states that in Austria, lupus constitutes 66 per cent of all skin diseases The removal of lupus, says our author, "can only be effected by mechanical or caustic interference The most rational and simple mode would be that of excision of the entire process, followed immediately by transplantation according to Thiersch's method or the ordinary methods of plastic surgery Unfortunately, the localization and extent of the foci are poorly adapted to this plan of treatment In addition, experience shows that relapses may occur even in the transplanted flaps Nevertheless this method merits more frequent use It should be kept in mind however that a flat thin cicatrix of the nose, eyelids and face obtained by prolonged treatment, causes less deformity than a plastic operation which is not brilliantly successful"

La Methode Brown Sequard, Traite D' Histotherapie *La thérapeutique des Tissus, Compendium des Médications par les extraits d'organes animaux, par le* Dr M Bra Ouvrage *précédé de lettres et préfaces de* MM *les Professeurs* Constantin Paul, Mendel, Ewald, Bruns, Emminghaus *et* Byrom Bramwell, *accompagné de 72 gravures* Paper 8vo, pp 624 Paris J Rothschild 1895

It is now six years since Brown-Séquard startled the world by a communication to the Société de Biologie in which he set forth the surprising results of subcutaneous injection of testicular fluid, and since that time animal tissue extracts have been gradually increasing in use The author has succeeded in this volume in bringing together a mass of facts collected of the results of the new therapy, which Ewald has named 'organotherapy," "histotherapy" by its founder, or "cyto therapy" as proposed by Gley There are thirteen chapters, the first on Organic Liquids in General, ii, Special Organic Liquids In these chapters, the reagents used in the preparation, and the instruments are described, doses, frequency and general methods are given The remaining chapters discuss particular extracts, their physiologic action, and therapeutic results The whole is written from the standpoint of an enthusiast The chapter on the use of the thyroid extract is very interesting, and its use seems to have been followed by more positive results than in most of the other preparations The work is a complete summary of the literature of the subject

Weekly Abstract of Sanitary Reports Issued by the supervising Surgeon General, under the National Quarantine Act of April 29, 1878, and the Act of Feb 15, 1893 Vol viii, (Nos 1 to 52) Washington Government Printing Office 1894

This bulky volume of 1,300 pages consists of the current numbers of the weekly abstracts for the year 1894 with a full index, bound in one volume for convenient reference It will be found very useful, when comparing mortality tables or the various questions in epidemiology that may arise from time to time

PUBLIC HEALTH

Compulsory Notification of Infectious Diseases in Constantinople —An Imperial irade has rendered obligatory in Constantinople the notification of the existence of cholera, variola, varicella, measles, scarlatina, dysentery, diphtheria, typhoid and typhus fevers whooping cough and phthisis Doctors neglecting this notification will be fined [1]

California State Quarantine Station.—Dr J H Davisson, President of the California State Board of Health, announces that the board has made arrangements, which are being carried out as rapidly as official procedure will permit, for the establishment of a State quarantine station at Cabazon, which place is on elevated ground, not far west of Indio A quarter section of ground is being purchased for the station, and it is the expectation to place there the necessary equipment for the comfort of passengers who may be detained in order to prevent the invasion of disease Dr Davisson says the station is not intended for the purpose of establishing a quarantine against consumption, as has been reported It is intended rather to be used to guard against invasion by smallpox, yellow fever, cholera and similar diseases

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[1] La Semaine Medicale April 20 1895

Chewing-Gum is not Food—The great American craze of gum-chewing has gotten over to England and into the English courts The *Public Health* for May, recounts a hearing before a Divisional Court, two justices sitting, the outcome of which was a decision that chewing-gum, or chewing-wax is not an article of food under the Food and Drugs Act of 1875 The price over there appears to be one half-penny a stick, and apothecaries who keep the article on sale have a label prepared which states that the article is, "For chewing only, not to be eaten" The effort to "stamp out" the use of chewing-gum in this instance was a complete failure

Washington Navy Yard Sanitation—In the recent report of the Navy Medical Board, appointed by Secretary Herbert to investigate the sanitary condition of the Navy Yard at Washington, it is pointed out that owing to the defective condition of certain sewers in that vicinity and the proximity of "the flats," from which during the prevalence of southerly or westerly winds, miasmatic effluvia are wafted over to the Yard, there is more or less malaria there and in its neighborhood While the Commissioners of the District have no jurisdiction over "the flats," at least so far as the improvement of them is concerned, they have full control over the sewers and can do much to remedy the unsanitary conditions, and how this remedy may be applied is also suggested in the report The Board says that even after all is done that the Commissioners can do, complete exemption from miasmatic influences will not be secured until "the flats" on the opposite shore of the river have been entirely reclaimed

Alcoholism in Belgium and Algeria.—While the number of saloons and retail liquor shops in Belgium has decreased 38,000 in the last five years, the results obtained toward lessening alcoholism are not deemed satisfactory by the Government A commission has been appointed to inquire into the ravages of alcoholism in that country and to study the remedies for the situation According to Dr Rouby, with a few exceptions the Arabs in Algeria drink nothing but water, the European colonists drink all the absinthe and alcohol The number of insane sent from Algeria to the asylum at Aix bears out this assertion From January 1 to August 1, 1894, two Arabs and fourteen colonists suffering from alcoholic insanity were received out of a population of 1 459,000—1,258 500 of whom are Arabs and 133,000 French Thus with a population nine times less the French colonists furnish seven times more alcoholic insane Rouby estimates that the proportion of non-insane alcoholics is 2,000 Arabs to 44,000 colonists for the whole colony He thinks this furnishes food for serious thought, and that the conquerors are succumbing to alcohol faster than to firearms[1]

Deafness among School Children—The fact that myopia is frequent among school children is well known It is not so well known that impaired hearing is also frequently met with The children thus affected are often accused of being lazy and inattentive, when in reality their ears are at fault Helot shows that these cases are quite common, are easily recognized, are generally incurable and when cured a large number of children are transformed, so to speak, both from a physical and a moral standpoint According to Weil of Stuttgart, the proportion of school children with impaired hearing is 35 per cent , according to Moure of Bordeaux, 17 per cent Helot agrees with Gellé and other aurists that the proportion is almost 25 per cent or one-fourth All the children in a class should be carefully examined and these semi-deaf pupils will always be found among the 'poor scholars" The cause of the infirmity is to be sought for —naso-pharyngeal catarrh following measles, scarlatina whooping-cough, adenoid vegetations, hypertrophied tonsils etc—and normal conditions are to be restored by appropriate treatment[2]

An International Sero-Therapeutic Institute—In an intervie between Professor Rummo, editor of the Naples medic daily journal, *Riforma Medica*, and Professors Ferrannini an Behring, the famous German expressed the wish, in vie of the present uncertainty as to the strength and purity antitoxic serums prepared in different laboratories and use in different countries, that there should be an Internation Sero-Therapeutic Institute established, to which all seru manufactured throughout the world should be sent an tested by an international committee appointed for the pu pose A standard of strength and quality should be decide on, and the committee should withhold its sanction from an serum which failed to come up to the standard This shoul apply not only to the diphtheria antitoxin, but to all kind of serum intended for therapeutic use In fact, there shoul be a control of serum of exactly the same kind as exists all civilized countries for weights and measure, only must be international As Malcolm Morris says in th *Practitioner* for May, this would eliminate the element *chauvinisme*, on which Professor Behring lays great stres a disturbing influence in scientific matters Moreover, would secure the uniformity in medication which is a nece sary condition for the formation of an accurate judgment to the therapeutic value of the remedy Professor Behri says that all the scientific authorities to whom he ha spoken on this subject, and particularly M Roux, are agreement with him as to the desirability of such an institute as he has in mind He is indifferent what countr may be chosen for the purpose, provided the thing is don Professor Ferrannini suggests Switzerland as at once central and not likely to excite national jealousies

Canine Diphtheria—It has been hitherto believed that o the lower animals only cows, guinea-pigs, cats and some o the *aves* were capable of communicating diphtheria to th human family But now it is reported that the healt authorities of Akron, Ohio, have traced thirty cases and thre deaths of this disease to a dog belonging to a milkman alon whose route the cases occurred Investigation of the milkman's premises disclosed, near the place where his mil cans were left over night, a dog-kennel, the occupant which showed every symptom of diphtheria Physicia said there was no doubt the dog had the disease It h been sick three weeks While the doctors went to the cit to obtain tubes to take a bacteriologic culture of the substance from the animal's throat the dog escaped and has no since been seen The cans to which the dog had access an the buildings were thoroughly disinfected and since then n new cases have developed The dog has not yet been discovered and there is much alarm felt in consequence President Sargent of the Sanitary Board is supported by leadin physicians in his belief that the dog was the cause of th spread of the disease and is still disseminating the germs A close watch is being kept for the animal It is to be hope in the interest of the etiology of diphtheria, that this do may be found, he should be an historic animal It shoul be mentioned, by the way, that a child suffering with th disease was discovered on the first inspection of the dairyman's farm, but this fact is relegated to proper insignificanc by the statements that the farm was "in a cleanly condition the peddler had not been near the little one and the mil he sold was secured at a distant farm" *Ergo*, it must hav been the dog

The Archbishop of Dublin and Vaccination—Shall the clerg use their influence over their flocks to favor vaccination an thus prolong the lives of the latter? The *Independent* sa yes, and avers that a church magnate, no matter how ex alted his position, can be engaged in no better business than keeping his sheep away from the variolous wolf That pa per shows that the French clergy did a great deal to popularize the use of vaccine in the early years of this century, and Jenner is reported to have himself taken pains to teach English clergymen how to introduce the lymph The *In pendent* adds the following 'Archbishop Walsh of Dublin, is credited with issuing a regulation in his diocese, directing that 'no one child or adult shall be admitted to confirmation or instructions in preparation for it who has not been vaccinated, or who, having reached the age of 7 years, has not been vaccinated' Upon this, one of our contemporaries remarks "If autocratic power is to be lodged in the hands of a bishop, this may be a good use to make of it" But to what more *beneficent use can the superior intelligence of* the educated clergyman be put, than in preventing disease? Had he the power every *one would agree that it was* Christlike to heal disease, and why is he not to be commended in taking a course that he undoubtedly sees the need of, among a peasantry that is still a long way from complete physiologic enlightenment *In the same week that the journals* bring the above, we find another interesting newspaper item, the purport of which is given below "L T, a waitress employed at a boarding house where the Yale crew take their meals, was sent to the pest-house yesterday suffering with smallpox One of the inmates of the boarding house is a certain unvaccinated freshman, whose home is in Newburg His father is at the head of an anti vaccination society in Newburg The freshman refused to be vaccinated, and the faculty ordered the young man to leave the college and he left Correspondence has been had with the authorities at Newburg, giving the facts in the case"

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[1] Rev Int Med et Chir Prat, No 8 1895

[2] Le Bulletin Medical, May 1 1895

No sooner had Jenner announced his discovery than a knot of "*antis*" began their work, and they still have their followers, who deliberately set up their individual opinion in opposition to the general consensus of the thought of the world The views of this one father look pretty small beside that of the whole Yale faculty

Health Reports —The following health reports have been received by the Supervising Surgeon General M -H S

SMALLPOX—UNITED STATES

New York City May 25 to June, 1, 1 case
Philadelphia May 18 to 25, 7 cases, 2 deaths, May 7 to 28 27 cases, 5 deaths
Ohio Cincinnati, May 9 to June 1, 21 cases, 5 deaths, Cleveland, May 7 to June 1, 7 cases, Gallipolis, May 7 to June 1, 1 case
Indiana Evansville, May 28, 1 case
Wisconsin Milwaukee, May 25 to June 1, 1 case
Virginia Staunton, May 28, 66 cases in smallpox hospital

SMALLPOX—FOREIGN

Athens May 12 to 15, 31 cases
Amsterdam May 11 to 18, 1 case
Antwerp April 27 to May 4, 1 case, May 4 to 11, 2 cases
Batoum May 1 to 14, 4 cases, 4 deaths
Bologna May 11 to 18, 1 case
Buda-Pesth April 22 to May 13, 5 cases
Cairo April 22 to 29, 4 deaths
Calcutta April 20 to 27, 97 deaths
Hong Kong April 13 to 27, 2 deaths
Madrid May 5 to 12, 1 death
Moscow April 27 to May 4, 1 death
Odessa May 4 to 11, 5 cases 2 deaths
Rotterdam May 11 to 18, 2 cases
St Petersburg April 27 to May 11, 15 cases, 4 deaths

CHOLERA—FOREIGN

India Calcutta, April 20 to 27, 60 deaths
Asia Minor Tarsus, cholera reported June 1, 1895
Arabia Mecca, April 22 to May 6, 213 cases
Japan Hiogo, 7 isolated cases, Osaka, 5 cases reported May 10

YELLOW FEVER—FOREIGN

Brazil Santos, April 20 to 27, 76 cases, 65 deaths
Mexico Vera Cruz, May 16 to 23, 3 deaths

The following letter has been received from Dr Stuart Eldridge, Sanitary Inspector, M -H S, at Yokohoma

No 167 YOKOHAMA, May 10, 1895

Sir —The condition in Japan as regards cholera remains much as at the date of my last report Single cases, rarely more, are reported from various localities in the region of the naval and military depots in the south, and isolated occurrences have been met with both in Hiogo (Kobe native town) and in Osaka So far, however, the disease has nowhere assumed the proportions of an epidemic and the Japanese authorities are evidently controlling it in an exceptionally successful manner How long they may be able to do so remains to be seen

There is absolutely no question, but that, both in Hong Kong and Macao there have been cases of plague, though the usual attempts at concealment of the danger have been made It is, however, to be hoped that the lesson of last year will not be lost, so far as the authorities of Hong Kong are concerned, and that, with the light of our new and more exact knowledge of the disease, more or less successful efforts at control will be made

ASSOCIATION NEWS

The Association Treasurer —Members are reminded that the *annual subscription is now due and payable at the office of the* TREASURER, HENRY P NEWMAN, *M D*, 36 Washington Street, Chicago, Ill Those paying at Baltimore are exempt from this call

We trust that as last year, we will be enabled to report that the losses by delinquency are almost nothing The great increase of membership in the last two years is almost entirely owing to the small number relinquishing membership The gains at each annual meeting have been considerable for some time but until the enlargement of the JOURNAL last year, the losses were *only a little less than the gains* Let us remember that by solidly supporting the ASSOCIATION and its JOURNAL, we are doing our part in that great work of professional organization so grandly *going forward* Let us all send our remittance promptly to TREASURER NEWMAN, and whenever possible the name of a new member along with it Let us not grow weary *in the good work Have you*, dear reader, obtained a new member this year? One determined effort, dear friends, and your ASSOCIATION may easily become the greatest *medical association in the civilized* world If you need application blanks cut them out of the JOURNAL or apply to this office and they will be promptly furnished

NECROLOGY

MATTHEW H BURTON, M D, formerly of Troy, died at Bay Shore, N Y, April 28, 1895, in his sixty-third year His father, Dr Caspar Van Wie Burton, formerly of Lansingburg, was a member of the AMERICAN MEDICAL ASSOCIATION from 1849, the son, Matthew H, from 1869 Father and son were prominent in the State Medical Society, the father even down to 1860, the year of his death The son was early a prominent member in the New York Medical Association, he had been president of the Rensselaer County Medical Society His place of birth was Albany, and it was from the medical college at that city that he graduated in 1853 He was early and long attached to the Marshall Infirmary of Troy, an institution established in 1851 and opened in 1854, one of whose departments is concerned in the care of the insane At the time of his demise he was making his home with his daughter, Mrs Plumb, at Islip, where he had been ill a period of eight or more weeks from acute nephritis His mortal remains rest in the cemetery at Troy

JAMES G PORTEOUS, M D, died suddenly of valvular disease of the heart at Poughkeepsie, N Y, May 12 He had just returned from Baltimore, where he was a delegate to the convention of the AMERICAN MEDICAL ASSOCIATION He was born at Moriah, Essex County, on Jan 3, 1839 He was graduated at Harvard University in 1862, and immediately entered the Army He served throughout the war with distinction as Surgeon of the 118th and 46th New York Regiments He was known as the "fighting surgeon," and was specially commended by Gen Benjamin F Butler for bravery on the field at Fort Harrison After the war he settled at Luzerne, N Y, and practiced his profession He served three terms as supervisor, and was a member of the Assembly in 1872 In 1880 he removed to Poughkeepsie, where he resided until his death He was a member of the Loyal Legion and a Mason of high degree He leaves a widow and three daughters

ELWOOD S LANSING, M D, of Burlington, N J, died May

29 He was the son of the late Ten Eyck Lansing of Albany, N Y , where he was born in July, 1827 He took his medical degree when he was 22 years old at the College of Physicians and Surgeons, New York He was brother to the member of Congress, Mr Lansing of Watertown, N Y , and was himself mentioned at one time in connection with the Democratic Congressional nomination from New Jersey He had served in the common council of Burlington, N J , several terms, and had held other offices in the city and county The deceased leaves a widow and a family of adult children

HENRY P HALL, M D , of Jamestown, N Y , died May 27, aged 60 years He was an alumnus of the Buffalo Medical College in the class of 1868 He had held the office of Pension Examiner under the present administration

DANIEL F GULLIVER, M D , of Norwichtown, Conn , May 22, aged 69 ——John Harris Grimes, M D , of Mishawaka Ind , May 25, aged 42 ——D W Grimes, M D , of Johnstown, Pa , May 25 ——Henry P Hall, of Jamestown, N Y , May 26, aged 59 ——George E Law, of Brooklyn, N Y , aged 55

MISCELLANY

He Remains a Frenchman —A cable dispatch of the 28th ult quotes from the Paris *Figaro* a statement to the effect that the German Emperor recently sounded M Pasteur as to his acceptance of a decoration upon the occasion of the opening of the Baltic Sea canal, and that the French scientist refused to accept the honor, declaring that he would never forget 1870 We hope to soon see an authoritative contradiction of this

Concentrated Boric-Acid Solutions —By heating boric acid to 47 degrees C with gelatin, a mass is obtained which contains 68 per cent of boric acid This emulsion dissolves in water with great facility and consequently a boric acid solution may be prepared of any strength [1]

Dr Seaver, director of the Yale gymnasium, has prepared a table showing the physical development of students entering that institution from the preparatory schools The following schools are given in the order of their excellence in these respects St Paul, Exeter, Williston, Lawrenceville, Hopkins' Grammar School, Andover, Hartford High School, Hillhouse High School Attention is called to the fact that the schools having physical instructors send their graduates in the best physical condition

A New York Police Surgeon's Certificate —At a recent meeting of the new Police Board of New York City, one of the unfortunates who were brought "under fire" was a police surgeon of the old variety, who had written a certificate in which appeared the word "abaration" for "aberration " Did he go through the old-time Civil Service exams ? The board will sit upon the case at a trial presently to be held

Charitable Bequests at Boston —Under the will of the late Matwin M Ballou, of Boston, Mass , the following hospitals will receive $2,000 each New England Hospital for Women and Children and the Boston Children's Hospital Sums of $2,000 are donated to certain other deserving organizations, $20,000 in all, to take effect at the death of the widow of devisor

Medical Peerages Created in Austria —The Medical *Press* states that "Dr Edouard Albert, Professor of Clinical Surgery, and Dr Hermann von Widerhofer, Professor of Children's Diseases in the University of Vienna, have been created Life Members of the Austrian House of Lords The other representatives of medicine in the Austrian Upper House are Dr Ernest Ludwig, Professor of Medical Chemistry, and Dr Schneider, both of whom are members of the Aulic or Privy Council "

A Dangerous Kind of Sneak-thief —Nearly all the servants of doctors have been warned against the possibly thievish visitors who call at their offices out of office hours and who ask to be allowed to wait long enough to write the doctor a note, or some "dodge" of that nature The "dodge" has taken this new phase lately, namely, the artful dodger claims to be a physician and calls upon a dentist whom he knows to be absent He will generally be allowed to wait a little while—and he does wait only just long enough to lay his hands on some article of value and then excuse himself

Post-Mortem Hyperpyrexia —The following conversation is alleged to have taken place between a clergyman and one of his lady parishioners "I don't see your husband with you so much as when you were on your honeymoon," said the clergyman, as he met an occasional attendant at his church "Has he grown cool?" "Not if what you preach be true," she said coyly "He is dead "

Some Military Don'ts —According to one of our military journals the following instructions have been put into the hands of every French soldier proceeding to Madagascar never go out without wearing your helmet, not even when the sky is cloudy When bathing never lie down on the ground , be content with sitting on your pack Never go out fasting , never drink anything but boiled water, tea and coffee , never leave off your stomach flannel , never on any account drink alcohol or eat fruit, even though it resembles ours

"Good Will" Recognized —It is so rare that the "good will" of a practice has any value, that we make note of the following news item from the New York papers, which shows that a dentist can sometimes get an injunction to protect his "territory" The Dr Fenn named below is a medical graduate, who appears to have gone into dental practice Dentist William W Niles has obtained an injunction from Judge McAdam, of the Superior Court, restraining Dr Elisha Fenn from practicing as a dentist in the territory bounded by the Harlem River, Seventeenth Street and East and North Rivers Dr Niles said he purchased Dr Fenn's business upon the distinct understanding that Dr Fenn would not open another office within the district mentioned

The Siamese Twins of New York City —The Academy of Medicine had an opportunity to inspect the twins of Mrs Koehler on May 27 Dr Tynberg has found seven recorded instances of joined twins similar to these, but Dr Jacobi says the number should be higher, eleven at least Dr Tynberg's remarks included the following "These two children were born at midnight on April 15 They are joined from about the third rib down to the coccyx by a heavy ligament There is no other juncture that I have been able to discover, and I do not think that they are, like other cases similar to this, dependent upon a common arterial system They are distinct and separate children, except in this particular, and I think that when they have grown older they can be safely separated " At the conclusion of Dr Tynberg's remarks the children were taken into another room, where they were undressed and shown to the physicians who wished to make a closer inspection of the remarkable case Both children are healthy and strong and are perfectly developed

Absorbent Power of the Human Bladder —The permeability of the bladder with intact epithelium having been in turn contested and admitted as a result of experiments on animals, Poussen and Sigalas determined to repeat these experiments in man, and have reported the results of their researches to the Paris Academy of Sciences They made use of a lithium salt injected into the bladder The least trace of this salt in the blood and the saliva may be easily and surely detected by spectroscopic analysis Their experiments were carried out on four individuals, three healthy and one with cystitis, and their conclusions are 1, healthy vesical epithelium is impermeable, 2, absorption occurs a, when the epithelium is altered pathologically, b, when the individual, even with healthy vesical epithelium urinates the urine then bathing the prostatic part of the urethra[1]

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[1] National Druggist, March, 1895

Horse Chestnuts as Food for Animals —During the disastrous year of 1893 many farmers applied to M Cornevin for advice as to whether to use horse chestnuts for their stock in lieu of other forage destroyed by the drought Some authors claim that these nuts will be readily eaten and constitute healthy nourishment, others claim that they are eaten with reluctance or even rejected altogether The author undertook a series of experiments to settle this question, using the shelled nuts He found that sheep may eat as much as a half kilo of fresh nuts daily and cows two kilos[2] Ducks are poisoned by eight to fifty grains and hogs refuse them absolutely Heating and prolonged maceration diminish the toxicity of *Æsculus hippocastanum* and Cornevin thinks this toxicity is due to the presence of a substance resembling saponine or colchinine

An Example to be Followed —Dr Andrew Annan, of Emmitsburg, Md, who was 90 years old on April 27, has contributed $50 to the Rush Monument Fund His father, Dr Robert Landales Annan, was a student of Dr Rush and his certificate of qualification for the practice of medicine is now in the possession of the latter's grandson Dr Robert L Annan, of Emmitsburg It is hoped that this example will be followed by physicians from every part of the country, that the statue may be completed without further delay Delegates to the recent meeting at Baltimore are reminded that they were constituted members of the Rush Monument Committee by their own unanimous vote, and that it was made their duty to obtain contributions from the members of the Societies they represented in the ASSOCIATION which they are requested to transmit, as promptly as possible to Dr George H Rohé, Superintendent of the State Hospital for the Insane, at Catonsville, Md, Secretary of the Committee, or to Dr Albert L Gihon, Medical Director U S Navy, Washington, D C Chairman

Disagreement over Advertisements —The New York County Medical Society has had a wrangle at its last meeting regarding the alleged unethical advertisements that appear in that Society's yearly *Register* An optician takes a half page space in which to make known how he can cure headache, nervousness, neuralgia, sore eyes and the like by the adaptation of spectacles Dr Van Leer moved that the editor of the *Register* be directed to strike out the advertisement or buy off the advertiser, on the ground that the claim of these sorts of advertising opticians was an infringement of the law against the unqualified practice of medicine, *i e*, quackery Such advertisements are bad enough in the papers throughout the country, he averred, but even worse in the organ of an influential medical society Dr Lewis, one of the editors, took the ground that the advertisement should be allowed to remain, first, because the *Register* had a contract with the alleged offender, and second, because the statements of the optician were true ones and great credit was due the optician, who was capable of doing much good This statement is alleged to have staggered the audience

Heavy Verdict for a Physician —At Brooklyn, N Y, Dr J R Quinn has recovered $8,000 for injury caused by a brewer's truck colliding with the Doctor's vehicle and throwing him to the pavement The defense attempted to show that the physician was driving on the wrong side of the street when the accident occurred He was in one track and the brewery wagon in the other He claimed the heavy horses suddenly swerved from the track and struck his phaeton But it was shown that both the tracks were to the east of the center of the street and the Doctor was on the left side of the center Testimony was introduced to show that this position was necessary, as the pavement was torn up and the cobblestones piled at the westerly or right side of the street The court held that when there were obstructions in the traveled part of the street, narrowing the passable portion, drivers were obliged to go to the right of the center of what was left This the Doctor said he was doing at the time The question is a new one and will be carried up on appeal

Recent Improvements of the London Hospital —According to the *Press and Circular*, a stained glass window containing the coats of arms and crests of past presidents or consulting members of the staff of the London Hospital has just been erected in the library of the London Hospital Medical College The window contains thirty two shields, on which are displayed the armorial bearings of the gentlemen formerly connected with the staff, and includes those of Dr John Andree, the first physician and Mr John Harrison, the first surgeon, appointed in 1740 There are also the coats of arms of Sir William Blizard, Sir Andrew Clark, and Messrs Richard Clement Headington John Goldwyer, Andrew James Luke, Thomas Blizard Curling, and Jonathan Hutchinson, all at one time or another Presidents of the Royal College of Physicians and Surgeons It is hoped in time to add the armorial bearings of many others, whose descendants have not yet been traced The trustees of the hospital have purchased the lease of a house in Bow Road for the preliminary training of nurses during their periods of probation before entering upon hospital work These pupil probationers besides being taught how to tend the sick will receive instructions in elementary physiology, anatomy, hygiene, sick cookery, etc, and preference will be given to those between the ages of 25 and 35 who have received a good education

Hospital Notes

THE trustees of Johns Hopkins Hospital have decided to erect an addition to the dispensary of that institution The building will be of brick of the same style as the other buildings and will contain three rooms——The corner stone of the new St Johnsbury Hospital at Bennington, Va, was laid May 26 The hospital will be of brick, three stories high and will cost over $10,000——The Children's Hospital at Philadelphia will be enlarged this year by the erection of a three story building

Society Notes

THE ANNUAL MEETING OF THE MEDICO LEGAL SOCIETY OF CHICAGO was held June 1 The following officers were elected for the ensuing year President, Edmond J Doering, Vice-Presidents, C D Wescott and Sanger Brown, Treasurer, Joseph Matteson, Secretary, John Ridlon——The forty seventh annual meeting of the Mitchell District Medical Society will be held at West Baden Springs, Ind, July 5 and 6 The meeting will be one of exceptional interest

Washington Notes

DR S C BUSEY —Dr Busey has almost entirely recovered from his injury and will leave shortly for Narragansett

DR J FORD THOMPSON is rapidly improving at Atlantic City

MEDICAL SOCIETY OF THE DISTRICT —The work of the Society during the month of May was interesting and instructive, as may be seen from the following papers which were read and discussed Dr William Osler, of Baltimore, Md, The Practical Outcome of Laveran's Researches on Malaria, Dr T Clark, Remarks on the Therapeutics of Diarrhea in Infants, Dr Bedford Brown, of Alexandria, Va, Non infectious Membranous Laryngitis—Its Prevention and Medical Treatment, Dr Stowell, Neuralgia of the Throat, Dr Kelley, Cases and Specimens of Stone removed from Female Bladder by Laparotomy, and Fibroid Tumor of Uterus with Polvic Abscess and Abscess of Appendix Vermiformis, Dr S M Burnett, Clinical Contribution to Study of Nuclear Paralysis of the Ocular Muscles, Dr Leach, Cystitis, Dr Harvey Reed, U S A, What Credence Should be given to the Statement of those who claim to furnish Vaccine Lymph free of Bacteria? Dr Dufour, Tumor of the Brain—Case and Specimen

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[1] La Semaine Médicale, No 23, 1895
[2] Les Nouveaux Remèdes, April 24, 1895

The Washington Obstetrical and Gynecological Society —On May 17 Dr J Tabor Johnson gave the history and presented the specimen from a case of oöphorectomy (double) for nervous symptoms—and a specimen supposed to be extra-uterine gestation Dr H L E Johnson presented the specimen and gave the history of three laparotomy cases—two cases of double ovariotomy, one cyst of tube and ovary To one case he called special attention M J, (white), age 21 years, invalid more or less for six years, entirely blind in right eye for one year Sight returned on second day after removal of small ovarian cysts of both ovaries He called attention to the relation of ocular diseases to pelvic troubles in women He intends presenting a paper on the subject at a later date and requested all physicians acquainted with similar cases to furnish him with their clinical notes He referred to a recent paper on the subject by S C Ayres, M D

Louisville Notes

Chapman —Louisville has sustained a great loss in the death of Dr W Carroll Chapman, who died at his residence in this city on the 28th inst of cerebro-spinal fever, after a twelve days' illness Dr Chapman had just returned from the last meeting of the American Medical Association and was feeling unusually well He had a severe chill and fever following, his illness being attributed to a sharp attack of malaria, but each day he became worse, his symptoms more marked and he died as above stated, on the twelfth day Few young men in the profession had as bright a future before them as did Dr Chapman He was born in Hartford, Ky, in 1863, and received his early education at St Cecilian College where he graduated at the age of 17 He began reading medicine with his preceptor at once, and later attended the College of Physicians and Surgeons of Baltimore, graduating there in 1884 He worked for some time in the out-door department of the college, was made an Assistant Demonstrator of Anatomy, and later received the appointment as Resident Physician at the Maternity Hospital, remaining one year He returned to Kentucky, and practiced his profession in his native city moving to this city about eight years ago At the time of his death he was assistant to the Chairs of Practice and Chemical Physiology in the Kentucky School of Medicine, a member of the Louisville Academy of Medicine, before which he read a paper recently (published in the Journal) on "Gastritis," a member of the Kentucky State Medical Society, where he was to read a paper at the next meeting on "The Chemic Changes in the Stomach as a Cause of Disease," the data of the paper being made up from original investigations conducted by him in the dispensary of the Kentucky School of Medicine, he was also a member of the publication committee of the State Society, a member of the American Medical Association, having just returned from Baltimore when taken sick, a member of the American Medical Editors Association, having been editor of the *Progress* for some years

Resolutions of respect were passed by his associates, members of the Sub Faculty of the Kentucky School of Medicine, the class at this school, and the Louisville Academy of Medicine

Homeopathic Society —The Kentucky State Homeopathic Society was in session in this city during the past week, and while in session received a communication from one Dr (?) Trunnell, purporting to be from Dr Ronald one of our oldest and most respected physicians The communication was written by Dr Trunnell, in which he used Dr Ronald's name inviting the homeopathic physicians to join in the formation of a Mutual Protective Association, which was to look after the widows and destitute orphans of deceased physicians of the State Members of the society addressed were elated at what they construed to be a more liberal attitude of the "old school" toward them and accepted the invitation Dr Ronald came out in a card in one of the afternoon papers and repudiated the whole thing, stating that he was not the author of the letter of invitation, did not know it had been written, and was greatly surprised that such liberties should be taken with his name

Leachman —Dr W T Leachman is dangerously ill at his residence in this city

State Society —The State Society meets in Harrodsburg on June 12, 13, and 14 Among those from Louisville who will contribute papers are the following the Care of the Newborn, by Henry E Tuley, Rectal Disease as a Specialty, by J M Mathews, The Blind of Kentucky, by J Morrison Ray, the Serum Treatment of Diphtheria, by W Cheatham, Treatment of Puerperal Sepsis, by Louis Frank, Modern Methods of Intestinal Anastomosis, by Aug Schachner, Adenoid Growths of the Naso Pharynx, by T C Evans, Some Reflections on the Therapeutics of Nervous Disease, by Curran Pope, Treatment and Protection of the Eye after Cataract Operation, by P R Taylor, Parasitic Diseases of the Skin, by W R Blue, Manifestations of the Rheumatic State in Children, by S E Woody

Health Officer's Report —During the past month there were 227 deaths, during the past week 64 Deaths corresponding month last year, 253 Estimated population, 200,000, estimated white population, 164,246, estimated colored population, 35,734 During the month of May consumption was the cause of 34 deaths, pneumonia 35, cerebral meningitis 17, organic heart disease 12, and there were 15 stillbirths

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THE PUBLIC SERVICE

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending June 1 1895

Medical Inspector T C Walton, ordered to examination preliminary to promotion as Medical Director

Medical Directors G S Beardsley, B H Kidder and W K Van Reypen ordered as a board to examine medical officers for promotion

Medical Director N L Bates, Medical Inspector J M Flint and P A Surgeon J D Gatewood, ordered as a board to revise the Book of Instructions for Medical Officers

Marine-Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the sixteen days ended May 31 1895

Surgeon J B Hamilton, granted leave of absence for five days, May 16, 1895

Surgeon G W Stoner, granted leave of absence for one day, May 22, 1895

Surgeon F W Mead, to proceed to Portland, Maine, and assume command of Service, May 18, 1895

P A Surgeon J J Kinyoun, granted leave of absence for seven days May 20, 1895

P A Surgeon R M Woodward, granted leave of absence for thirty days, May 23 1895

P A Surgeon G B Young, detailed to make physical examination of officer, revenue cutter service, May 24 1895

P A Surgeon M J Rosenau, to proceed to Staunton, Va, for special temporary duty May 17, 1895

Asst Surgeon Seaton Norman to rejoin station at Baltimore, Md, May 25, 1895

Asst Surgeon Emil Prochazka, to proceed to Cleveland, Ohio for temporary duty, May 25, 1895

LETTERS RECEIVED

Antikamnia Chemical Co, (2) St Louis Mo Ashmead, A S New York N Y Amen & Hiestand Hillsboro, Ohio, Ayer, N W & Sons, Philadelphia, Pa Adams S S Washington, D C

Baker Jas B, Charlottesville Va Bovee J W, Washington, D C Barber C T, Brooklyn N Y, Bowker H M Boston, Mass Brayton, L T Chicago, Ill Bodine, J M, Louisville, Ky, Biddle, A G Detroit, Mich

Caunaday, C G, Roanoke, Va Canfield, W B Baltimore, Md Chamberlain, C N Andover Mass Chicago Policlinic, Chicago, Ill, Copeland J E, Round Hill, Va Culbertson J C Cincinnati Ohio

Ewing, F C, St Louis Mo, Ellis, H Bert, Los Angeles Cal Ettinger C S, New York, N Y

Fowler S S Martiensville, Pa

Galvano Faradic Mfg Co New York, N Y Girard A C Fort Sheridan Ill Graham, J W, Denver, Colo, Gardner, R W New York, N Y

Holton Henry D Brattleboro, Vt Ham & Carver Dubuque, Iowa Horner, Frederick Marshall, Va Hubbard, Thos H Columbus Ohio Hammond W A Washington, D C Hester, W W, Chicago, Ill Haldenstein, J, New York, N Y

Jones Harry C New York N Y Johnson, G J Chicago, Ill

Leedom Chas Philadelphia, Pa Lindholm, E M, St Paul, Minn

Martin F H, Chicago, Ill Marks A A New York, N Y, Malsbary, Geo E Cincinnati, Ohio

Newman Robert New York City, N Y

O'Brien, M C, New York, N Y

Palmer E R Louisville Ky, Phelps, R M Rochester, Minn Parmele C R New York N Y

Rohé, Geo H Baltimore Md Remick, A E Chicago Ill

Subscription News Co, Chicago Ill Sternberg, Geo M, Washington, D C Stearns F & Co Detroit, Mich

Truesdale, C C Rock Island Ill Trimble, J R, Baltimore, Md

Vetter J C & Co New York, N Y

Wyckoff R M, Brooklyn, N Y Warren C E, Roslindale Mass, Wheaton, C A St Paul, Minn Western Publishing House, Chicago, Ill Wanzer, L M F, San Francisco, Cal, Ward, R C, Northfield, Mass

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ORIGINAL ARTICLES

THE CONSERVATIVE USE OF THE STOMACH TUBE IN THE TREATMENT OF GASTRIC DISEASES

Read by title in the Section on Practice of Medicine at the Forty-sixth
Annual Meeting of the American Medical Association
at Baltimore, Md, May 7-10, 1895

BY J M G CARTER, M D , Sc D , Ph D

PROFESSOR PREVENTIVE AND CLINICAL MEDICINE COLLEGE OF PHYSICIANS
AND SURGEONS OF CHICAGO FELLOW OF THE AMERICAN ACADEMY
OF MEDICINE, ETC

WAUKEGAN, ILL.

The use of the stomach tube in the treatment of gastric affections has become so common in certain localities that it is necessary to call attention now and then to the dangers, as well as to the advantages of its use, and to study its scientific application

Since Kussmaul urged the advantages of the stomach tube in 1867, the profession has given more or less thought to it, Leube in 1871 recommended the tube for diagnostic purposes, and in 1875 Ewald used the soft rubber tube for washing out the stomach During the last twenty years it has gained in favor, and diseases of the stomach have been so thoroughly investigated by means of this instrument and the chemic analysis of the stomach contents, that a new specialty has been placed in the medical field

A word of caution needs to be uttered to prevent the popularity which this method has attained from carrying its use too far No more cases occur now which need the tube than did before the discovery of its value rendered its use so common It requires skill and patience to know when it should not be used and to wait for the slower processes of other methods of treatment

It is well, then, to mention briefly some objections to, and dangers accompanying its use Some degree of alarm is occasionally felt at finding portions of mucous membrane attached to the tube when it is withdrawn from the stomach Especially is this the case with stiff instruments It may occur also with the soft tubes Where the patient's mucous membranes are thin and easily irritated, and where the epithelium is more readily removed than seems normal, I dislike to use the tube In such cases abrasions are likely to occur, and although there is a tendency to rapid healing under such circumstances, the possibility remains that some cases may not heal and the traumatism may lead to ulcer of the stomach The possibility of such an occurrence should suggest a careful investigation of the mucous membrane before introduction of the tube In aphthous and other inflammatory states it is ordinarily not advisable to use the tube Another danger is that perforation of the esophageal or gastric wall sometimes occurs The possibility of this accident should be remembered in stenosis of the cardia or esophagus, in ulcer of the stomach and in the later stages of gastric cancer This accident has occurred in very skillful hands and is not to be lightly viewed Such cases have been reported by Abercrombie, Frerichs and others I should consider the stomach tube contra indicated in stenosis due to pressure of aneurysm or abscess, and in cases accompanied by degeneration of the tissues above the stricture—a matter, however, which could not be easily discovered before death In ulcer and the later stages of cancer of the stomach, the danger of perforation is sufficient to contra-indicate the use of the tube except in rare instances An objection to the use of the tube in inflammation or congestion, in ulcer and in altered conditions of the mucous membrane is the fear, even the probability, of causing hemorrhage These hemorrhages are not always manifested as a sudden hematemesis but may, by causing an abrasion of the mucous membrane or rupturing a small vessel, produce an oozing or slow hemorrhage, sometimes shown only by darkened or blood stained stools However, an alarmingly profuse hematemesis may occur and the possibility of this accident should be eliminated or reduced to the minimum by extreme caution in such cases

The fact that syncope and death have resulted from the use of the stomach tube is a matter of considerable interest and great importance The varying pressure upon the great abdominal plexuses of the sympathetic, produced by filling and emptying the stomach with the tube is believed by Fenwick to be the cause of this accident The indiscriminate washing out of the stomach and filling the stomach with excessive quantities of water are to be discouraged

Besides the evil results which may occur from pressure upon the sympathetic plexuses, it is undoubtedly true that the mere irritation of the mucous membrane in the stomach by the presence of the tube may produce fainting or syncopic attacks, as also occurs occasionally when food is introduced into the stomach These cases seem to occur under circumstances where the irritation would ordinarily produce vomiting, but some idiosyncrasy causes the syncope instead of nausea, or perhaps both sensations may be experienced

Spasm and tetany are somtimes met with and the latter may prove fatal Manges gives 72 per cent as the mortality in cases of tetany Although few cases have been reported as compared with the great number of times the tube has been used, still precaution is urged, as we do not know in advance what patient may die from this complication The spasm of the throat is very common and in many cases requires the use of cocain Spasm in children may prevent the use of the tube except under chloroform or ether Another objection to the use of the tube, which has been considered by some even more serious than those already mentioned, is the removal of the natural secretions by lavage The habitual washing out of the stomach when considered from this point of view only, undoubtedly is to be discouraged The withdrawing from the body's nourishment of the chyme which the stomach labors so hard to manufacture is not to be considered lightly, but if the digestive and absorptive powers of the viscus are impaired it can not be known that undigested food does not remain in the stomach until it acts as a foreign body If relief is afforded the patient by the use of lavage it may be accepted usually as evidence that good has been accomplished Still it must follow that no general treatment by lavage should be adopted until careful investigation has shown that the benefits to be derived outweigh the risks assumed

Again, when lavage has accomplished its work it should be stopped Further use may prove to be a positive evil I know a case where a young lady was advised to use the stomach tube for nervous or functional dyspepsia She submitted to the treatment by a young physician who was very enthusiastic in his work The patient improved for a time At this point a conservative physician would have stopped the treatment The lavage was persistently continued for months, however, the case growing worse, and after a year of such treatment the too submissive patient was not so well as she was when the lavage was begun Such instances of indiscretion in the use of any remedial agent, while suggesting caution, do not militate against the value of the measure when properly used

I should advise the use of the tube for the purpose of lavage or washing out the stomach for the following six objects 1, to remove undigested food and foreign matters, 2, to cleanse the mucous membrane for the action of medicines 3, to check hemorrhage, 4, to give antiseptic douchings, 5, for sedative purposes, 6, for general tonic effects upon the stomach, mucous membrane and parietes

1 The removal of undigested foods may become necessary in indigestion, functional dyspepsia, dilatation, cancer and pyloric stenosis In such cases nothing can be done until the stomach has been relieved of the offending matter Frequently in some of these cases vomiting can not easily be induced, and in others it is not to be encouraged It is a common experience that no treatment gives such complete temporary relief in functional dyspepsia, dilatation, cancer and stenosis as lavage This removes the undigested remnants of food, fermentative and putrefactive products, and exercises a beneficent tonic influence upon the gastric mucous membrane

2 In atrophy, chronic gastritis and also in functional dyspepsia, as in other neuroses, washing the tenacious mucus from the membrane gives a surface by which medicines are more readily absorbed There is no doubt that tardy recoveries or entire failures in the treatment of some neuroses, including atonic or nervous dyspepsia, are due in part to the failure of the gastric mucous membrane to absorb the medicines prescribed This occurs often where the absorptive function is not materially impaired Such cases can be explained by supposing that the tenacious mucus on the mucous membrane interferes with the process of absorption The removal of this mucus will facilitate the action of the medicines which are given

3 The application of cold is a common method of controlling hemorrhage Ice cold water can be applied to the mucous membrane of the stomach in hematemesis in two ways First, the patient may be required to drink ice water and swallow bits of ice The quantity which can be thus used is limited Second, it frequently happens that hemorrhages occur in ulcer and other pathologic conditions under circumstances which do not forbid the use of the stomach tube and where a prolonged application of cold to the gastric surface is desirable In such conditions one is justified in applying a continuous douching by withdrawing the water after it has been in the stomach four or five minutes and re-introducing a supply of ice-cold water to be again withdrawn in the same manner This process may be continued as long as necessary, if no untoward symptoms arise from the prolonged use of cold In ulcer, cancer, and rupture of vessels of considerable size, danger may attend the expression method of emptying the stomach hence it is wise to use an aspirator or exhausting bulb or syringe to remove the water

4 One of the most simple and advantageous uses of the tube is for the purpose of removing the products of fermentation and putrefaction In all diseases where fermentation occurs, as in functional dyspepsia, certain other neuroses, dilatation, chronic gastritis and cancer of the stomach, the gases and other abnormal products of faulty digestion act as irritants, and nothing relieves the patient so quickly and completely as lavage In many of these cases especially nervous dyspepsia and gastrectasis, and often in chronic gastritis, lavage not only serves to give temporary relief, but is also an excellent therapeutic agent in accomplishing a permanent cure

5 Perhaps no class of diseases of the stomach is so generally benefited by lavage as the neuroses. Functional dyspepsia has already been mentioned Gastralgia, nervous eructation, hyper-secretion, the various conditions accompanying neurasthenia and nervous vomiting are frequently thus relieved, the depraved condition (if one exists) which allows these states to arise removed, and a gentle tonic influence imparted to the gastric mucous membrane which is spread until it helps to remove the cause of the neurosis The impression made upon the general nervous system, the quick response of the sympathetic system, the increase in the circulation and consequently the improved general metabolism are, without doubt some of the most important effects of washing out the stomach in these cases The readiest means of relieving obstinate hiccough, heartburn and other symptoms of gastric irritation may often be found in the use of lavage No one who has had large experience in such cases can doubt the beneficent influences of lavage Nevertheless, there are some neurotics who can not submit to the lavage treatment on account of syncopic or other distressing symptoms

6 It can not be doubted that cold or tepid bathing and sometimes hot bathing produces general tonic effects Similar effects are often observed in the lavage treatment of the stomach—bathing or washing that viscus In atonic conditions of the muscular coat of the stomach, in anemic conditions of the mucous membrane and in deficient gastric secretion, there are few remedial agents which will produce better results than systematic lavage Auto-lavage, or the use of the tube by the patient is not to be encouraged, except in the few cases where definite in-

structions with proper cautions and restrictions will be observed

A review of the foregoing study of our subject reminds us that while the field for lavage is large and its position as a therapeutic measure established, it requires skill and care to use it always for good and not for evil There are many conditions, idiosyncrasies and circumstances which will forbid its use Some of these can be overcome some can not Conservatism should mark the physician's course here, as in most departments of medical practice

THE EFFECT OF INHALATION OF OXYGEN UPON THE HEMOGLOBIN

Read in the Section on Practice of Medicine at the Forty-sixth Annual Meeting of the American Medical Association at Baltimore Md May 7-10 1895

BY GEORGE J PRESTON, M D
PROFESSOR OF PHYSIOLOGY AND DISEASES OF THE NERVOUS SYSTEM
COLLEGE OF PHYSICIANS AND SURGEONS
BALTIMORE MD

Ever since the discovery of oxygen by Priestley in 1774, it has been used as a therapeutic agent In fact, Priestley himself made a number of experiments upon animals with the gas, thus preparing the way for experiments upon the human subject A few years after his discovery, Lavoiser and Spalanzani demonstrated the relationship of oxygen to atmospheric air, and showed in a rough way the changes it produced in the blood These experiments were more physiological than therapeutical, but not long after this date, Caillens in 1783 employed oxygen therapeutically Jurine of Geneva, and Chaptal of Montpellier, followed with reports of cases of phthisis benefited by its use The report of Fucroy to the French Academy was very extreme, making as it did absurd claims for oxygen in the treatment of numerous diseases Beddoes in 1789 made a number of important observations upon the physiologic action of oxygen, and also employed it in practice In conjunction with Sir Humphrey Davy and James Watt he established an institution for the treatment of disease by oxygen, an account of which may be seen in an extremely interesting paper on its therapeutic use by Dr A H Smith in the *New York Medical Journal*, April, 1870 Gardner in the *American Journal of Medical Sciences*, 1844, makes the remarkable statement that, " by the use of peroxid of nitrogen, or by rapid breathing, an increased quantity of oxygen enters, and as it can not be expelled as an element it acts upon more atoms of fibrin " Richardson made a number of experiments upon animals, and concludes that " the blood does not take up more oxygen unless more CO_2 is given off " (*Lancet*, 1878)

The above citations taken from the literature of the century following the discovery of oxygen, will give some idea of the way the profession regarded the subject The literature is quite considerable but of little real value, since the rather crude experiments proved little, and the clinical experience related proved entirely too much The experiments of Lavoiser and Spalanzani referred to above, showed the effect of oxygen upon the blood, although the fact that blood exposed to the air changed color was known long before this time, as early as 1665 Davy then extracted oxygen from blood, Regnault and Reiset and also Liebig announced that animals used the same amount of oxygen when breathing an atmosphere composed of that gas alone as when they breathed ordinary air (McKendric) Liebig claimed that the gases were not merely dissolved in the blood, but existed in a state of loose chemic combination Funke Hoppe Seyler Schmidt, Stokes and others between the years 1853 and 1864 carefully worked out the nature and function of hemoglobin

The history of the experiment of placing animals in an atmosphere of pure oxygen is an interesting one to physiologists, serving as a valuable object lesson For many decades after the discovery of Priestley it was held that an animal could not live in this pure element Then it was discovered that by providing for the absorption of the expired CO the life of the animal could be indefinitely prolonged In regard to the number of respirations, my experiments showed that for the first few minutes there was a great rise, then a fall to about half the normal number In the human subject the inhalation of pure oxygen seems to have little effect upon the pulse or arterial tension, but diminishes the number of respirations

Admitting the fact that inhalations of pure oxygen under normal temperature and pressure, cause merely a diminution in the number of respirations a very practical question arises, namely, whether in the inspiration of pure oxygen the blood becomes more highly oxygenated than it does when ordinary air is breathed The early observers fixed hardly any limit to the absorption of oxygen, believing it to be merely dissolved in the fluid as a whole Then it was shown that the hemoglobin of the red corpuscle played a very important part, appropriating the oxygen from the plasma As a matter of fact the serum is capable of absorbing little if any more of this element than of distilled water The relationship which hemoglobin bears to the red corpuscle is still somewhat *sub judice*, we simply know that the combination of oxygen with hemoglobin is a very loose one, subject to certain laws of pressure and temperature, and that disassociation may be very easily brought about without disturbing the molecule of hemoglobin (Foster) The old observers thought that by the inhalation of pure oxygen a condition of what they termed "super saturation" of the blood was obtained More exact observation showed this view to be untenable Under pressure it is possible to make the serum take up more oxygen just as distilled water will do under like conditions The quantity taken up by the hemoglobin of the red corpuscles is fixed, or nearly so Experiments upon a solution of hemoglobin show that if a sufficient quantity of oxygen be present each gram of the solution will take up 1 59 c c If there is an insufficient quantity present the hemoglobin will not be completely satisfied, or, to quote Foster " We may perhaps say that a part only of the hemoglobin gets its allowance of oxygen, while the remainder continues reduced ' Or it may very well be that while breathing ordinary air, a certain proportion of the red corpuscles pass through the pulmonary capillaries with their hemoglobin unsatisfied, or only partially satisfied with oxygen The following experiments bear upon this point The animals were placed under a glass jar which was first filled with pure oxygen which had been washed several times and a stream of the gas was allowed to pass into the jar from a cylinder A sufficient quantity of caustic potash was kept in the jar to absorb all the CO_2 The hemoglobin was measured by the hemoglobinometer of Fleischl before and after the experiments

Experiment 1 White rabbit, hemoglobin 58, respirations 100 Was kept in the oxygen for five minutes, and at the end of this time the number of respirations had gone up to 200 a minute and there was no change in the per cent of hemoglobin

Experiment 2 Black rabbit, hemoglobin 52, respirations 100 Was kept in oxygen for fifteen minutes The number of respirations fell to 80 and the per cent of hemoglobin rose to 80

Experiment 3 White rabbit, was kept in oxygen for thirty minutes and respirations dropped from 100 to 60, and hemoglobin rose from 58 to 62

Experiment 4 Black rabbit, one hour in the oxygen, respirations dropped from 100 to 35, and hemoglobin rose from 52 to 67

Experiment 5 White rabbit, thirty minutes in oxygen, respirations dropped from 120 to 56 and hemoglobin rose from 55 to 62

Experiment 6 White rabbit, one hour in oxygen, respirations dropped only 10, and there was no change in the hemoglobin It was ascertained afterward that the oxygen in the cylinder was exhausted toward the close of the experiment

Experiment 7 White rat, respiration 200, hemoglobin 94 Kept in oxygen thirty minutes Respiration dropped to 100, hemoglobin rose to 97

Of the seven experiments, there were only two that did not show diminution in the number of respirations and rise in the percentage of hemoglobin Of the two failures Case 1 was not kept in the oxygen long enough, as later experiments proved, and the other, Case 6, through the exhaustion of oxygen in the cylinder was breathing practically atmospheric air toward the close of the experiment

Experiment 8 Small dog Oxygen was injected into the rectum for forty minutes Respirations fell from 24 to 10, hemoglobin rose from 82 to 84

In addition to the above experiments on animals, the following observations were made on four healthy men

Experiment 9 Mr C, weight 140 pounds, inhaled oxygen for seven minutes, hemoglobin estimated before inhalation 82, after 92

Experiment 10 Mr B, weight 160, time of inhalation five minutes, hemoglobin, before 78, after 87

Experiment 11 Mr C, weight 150, time of inhalation six minutes, hemoglobin estimated before inhalation 76, after 83

Experiment 12 Dr P, weight 190, inhaled oxygen five minutes, hemoglobin estimated before inhalation 80, after 95

There were no special symptoms attending the inhalation of oxygen except a certain lessening of the desire to breathe There was not present the exhilaration and quickened pulse which has been described This agrees with the observations made by Kerr, (*Lancet*, 1893) While one naturally hesitates to draw conclusions from so small a number of experiments, still it would seem reasonable that the inhalation of pure oxygen raises decidedly the percentage of hemoglobin in the blood In all probability this is brought about, not by increasing the oxygen in the plasma, but by the fact that an excess of oxygen being present, all the hemoglobin is satisfied, or, to put it another way, fewer of the red corpuscles pass through the pulmonary capillaries, without obtaining their complement of oxygen

While making these experiments it occurred to me that something might be learned from the study of the blood during and after the use of anesthetics. The first case examined showed a decrease of hemoglobin from 80 to 68, the estimations were made before the subject was put under chloroform and again after he had been under the influence of the anesthetic for fifteen minutes Shortly after beginning this series of experiments I saw the very interesting paper by J C DaCosta, published in the Philadelphia *Medical News*, March 2, 1895 This observer demonstrated the marked reduction of hemoglobin during etherization, and also showed that this was not due to any diminution in the number of the red corpuscles These experiments of DaCosta's taken together with my own, would go very far, it seems to me, toward proving the truth of the supposition stated in the first part of this paper, that in ordinary respiration a certain proportion of the red corpuscles were not completely satisfied with oxygen, or that in their passage through the pulmonary capillaries many of the corpuscles got through without having their reduced hemoglobin acted upon by oxygen

The subject of the therapeutic use of oxygen, if any one will glance over the literature, has been treated in a thoroughly empirical manner Almost every known disease has been cured by its use, if we can believe the glowing accounts of enthusiastic advocates Moreover it has been so largely used by quacks, and so actively advertised by nostrum vendors, that the profession have naturally been deterred from its use The investigation and the experiments related above were undertaken to see whether or not there was any scientific basis for the many claims made for the therapeutic use of oxygen. Although these experiments have been few, and not very exact, still enough has been done to show that the percentage of hemoglobin in the blood can be largely increased by the inhalation of pure oxygen This method should have a full and scientific trial in pneumonia, acute bronchitis, pulmonary emphysema, pulmonary tuberculosis, and diseases obstructing the air passages Again it might give good results in the treatment of certain forms of anemia Its most brilliant future probably lies in its use by rectal injections Kellogg and others have made some limited experiments with this method of introduction, but it needs further trial Among those who have recorded clinical observations in the use of oxygen in various diseases are Gardner (*American Journal of Medical Sciences*, 1844), Birch (*Lancet*, 1857), Richardson (*Lancet*, 1878), Professor Cabell (*Virginia Medical Monthly*, 1874), Oppenheim (*Deutch Med Woch*, 1876), Hayem (*Gaz des Hop*), Gray (*Virginia Medical Monthly*, 1874), Wallian (N Y *Med Rec*, 1883-84 85), (*Med News*, 1890), Neech (*British Medical Journal*, 1892), Kerr (*Lancet*, 1893), and many others For the full description of the methods of using oxygen therapeutically, reference is made to the interesting paper of Aulde in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Dec 6, 1890 These preliminary notes on the use of oxygen are offered in the hope that the profession may be induced to make further and more careful use of an agent which theoretically, at least, should prove valuable

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LEAD ENCEPHALOPATHY WITH A REPORT OF A CASE

Read in the Section on Practice of Medicine at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore Md May 7-10 1895

BY ALBERT E ROUSSEL, M D
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R H, age 35 years, an artist by profession, first consulted me March 3, 1890 The patient, a well-nourished and intelligent man of good habits, had never been sick from childhood, and reported a remarkably good family history For some time previous he had noticed a gradual deterioration of health, as manifested by persistent insomnia, coated tongue, loss of appetite, mental and physical lassitude and an increasing tendency to constipation A careful physical examination gave no clue to the cause of the above symptoms, save visual evidences of a rather pronounced anemia Examination of the blood gave 2,500,000 red corpuscles to the c m, while the hemoglobin remained about normal, 85 per cent Some slight accentuation of the second sound of the heart was discernible The urine was concentrated, reddish in color, specific gravity 1018, with absence of both albumin and sugar

Three days later (March 6) I was hastily summoned to the bedside of my patient, who had suddenly been seized with a most excruciating attack of colic with attendant marked constipation The pain was most severe in the neighborhood of the umbilicus, intermittent in character and decidedly relieved by forcible pressure during the attack, while marked hyperesthesia was manifested during the intervals, so that even superficial pressure was badly supported The abdomen was decidedly retracted and the liver dullness apparently slightly diminished The tongue was white, flabby and tremulous and there was now apparent, for the first time, a faint bluish line at the margin of the teeth Temperature 97 3 5 Urine specific gravity 1014, absence of sugar and albumin, but subsequent examination exhibited slight traces of lead

Evidently the case was one of lead poisoning, and appropriate treatment was therefore instituted, but the interesting question remained as to the manner of entrance of the poison into the system Although distantly allied to that of house painter, the occupation hardly gave answer to this query, and it was only after careful investigation that the following interesting fact was elicited The patient had recently married, and the newly made wife had, with commendable neatness, objected to an old established habit of the husband, which consisted in wiping his brushes on his clean linen Accordingly our patient now refrained from that, but after more or less completely cleansing his brushes, would now pass them between his lips This condition of affairs had only been in progress for about six weeks before the commencement of the above detailed decided symptoms, beside which, as was pertinently remarked, his mode of life, residence, etc, had otherwise remained the same

Under treatment, the attack gradually diminished in intensity so that on March 9 the colicky pains had almost disappeared The blue line on the gums had, however, become more intensified and a well-marked patch similar in character was now observed on the mucous membrane of both cheeks These patches became white in color when the mouth was washed out with oxygenated water, as pointed out by Gubler, nor were there other evidences of a speedy convalescence On the contrary, headache, dimness of vision, general muscular as well as arthritic pains now became prominent, as well as slight palsy of the right arm An examination of the eyes was made at this time, but revealed nothing typical The above symptoms continued, notwithstanding the treatment, until March 14, when while on the street our patient after experiencing a decided feeling of malaise, suddenly fell to the ground, seized with an attack of convulsions He was at once removed to a neighboring saloon and two hours later to the Pennsylvania Hospital At the time of his admission a violent delirium manifested itself, and continued without interruption throughout the entire night

On the following morning his condition being unchanged and no history being obtainable, the hospital authorities decided to transfer him to the insane department of the Philadelphia Hospital when his wife discovered his whereabouts and took him home

At this time, March 15, the delirium was extremely violent and continuous, and it was found necessary to strap the patient to the bed to prevent his bodily injury Temperature 1013 A small quantity of urine drawn from the bladder gave evidence of the continued absence of both albumin and sugar Contrary to the established rule in these cases there was no period of somnolence, and notwithstanding the administration of large doses of soporifics, both by the stomach and by hypodermic injection, it was found to be utterly impossible to produce sleep

On the morning of March 16, the condition remained unchanged, with the natural exception of evidences of failing strength At about 11 A M a severe convulsion occurred which was repeated at 1 P M, at the hour of my arrival This was general in character and after having lasted some fifteen minutes I had recourse to the anesthetic effects of ether After a rather large quantity had been administered I had the profound satisfaction of noting the cessation of the convulsive attacks and the beginning of a long and profound sleep This continued for a period of seven hours, at the end of which time there was a sudden awakening with complete restoration of consciousness and the entering into a subsequent speedy convalescence

It is interesting to note that an examination of the urine immediately following the convulsive attack showed for the first time the presence of albumin in a fairly abundant quantity, without, however, any casts A slight trace of sugar was also discernible on this occasion

The question as to the exact cause of these cerebral symptoms does not seem to be much further advanced than in the time of Tanquerel Recent post-mortems of cases of this kind made by Renant shows the brain substance to be yellowish, harder and more friable than normal, and chemic analysis shows the distinct presence of lead in the cerebral tissue But these same conditions have also been noticed in other cases of lead poisoning which had not presented cerebral symptoms

Therefore, besides the direct action of the lead on the brain cells we should, I think, admit the action of the poison on the cerebral vessels themselves, which may produce subsequent hemorrhage or softening to the parts supplied

The question of uremic poisoning, as explanatory of this condition, should more properly be regarded as exceptional, instead of the general rule Not only is albumin more often absent than present, but when found in only a moderate amount and not associated with other evidences of renal disease may very well be due to the rapid disintegration of the blood corpuscles, which we know does now occur and which usually marks the exasceration of the general condition Besides which we have the temporary albuminuria immediately following the convulsive attack

As pointed out by Hayem, the blood changes are those showing a marked loss of red corpuscles and a normal percentage of hemoglobin, the white corpuscles being unaltered Chemic analysis of this fluid will show the presence of lead

Quite recently Debove, Achard, Charcot and others have given us strong evidences tending to prove that many of the so called cases of saturnine apoplexy are distinctly hysterical in nature and readily respond to the special treatment They point out that hemianesthesia may appear early in the case, or, on the other hand, after apoplectic or convulsive seizures The above condition may exist alone or accompany a motor hemiplegia with abolishment of sensation to contact, pain and temperature, with feeble or suppressed vision, hearing, taste and smell Some peripheral reflexes may persist, but the pharyngeal reflex is generally abolished

In a rather large experience in case of lead poisoning I have recently had reason to confirm the views of the above writers, namely, that in a fair proportion of cases many of the symptoms formerly attributed to the direct action of the lead, such as anesthesia, a hyperesthesia of local parts, much of the headache, etc , may be more successfully treated by the bromids than by the iodids According to the views of the above authors, the existence of hemianesthesia is proof of the hysterical nature of the affection

This may also explain the relative frequency of cases of lead encephalopathy, found in recent medical literature, with a proportionate lessening of the mortality records Tanquerel, in his large experience, met with but seventy cases which presented mortality of about 80 per cent , and at the present day, men of wide experience and careful observation mention its rarity as well as continued high death rate

A short time since I treated two cases of so-called lead asthma, on the above theory, with such prompt and satisfactory results that I think the fact merits special attention In both of these cases I noted that the expiratory dyspnea was not so proportionately marked as in cases of true asthma As the symptoms are otherwise identical, with the exception that they disappear when the special poison is removed from the system, the above fact if further corroborated may prove to be of diagnostic importance

Trophic Changes —Gubler points out that the dorsal tumor of the wrist which has long been considered pathognomonic of lead poisoning, is a swelling of the sheaths of the extensors as a result of the paralysis of the posterior muscles of the forearm This is an indolent tumor, generally about the size of a pigeon's egg, situated on the dorsal aspect of the wrist, hard and resisting to the touch and movable with the extensor tendons

Regarding the treatment of the encephalopathy but little can be said other than that it should be symptomatic Undoubtedly the main indication is to produce sleep, as experience teaches us that the longer the patient remains in this condition the less apt is the case to terminate favorably Permanent insanity has resulted

The anesthetic effect of the ether followed by a long sleep, as in the case reported in this paper, would, I think, prompt me to make earlier use of this agent if other remedies fail.

Just one word more as regards the treatment of the lead colic and constipation Following the teaching of recent French authorities, I have made use of large doses of olive oil, in half a dozen or more cases, with apparently more satisfactory results than by the use of magnesia and other drugs In three of the above cases, the use of the oil relieved the pain before the bowels were opened, and I think this treatment merits further attention Cocain or other similar remedies may be necessary, however, to cause the stomach to retain this medicament

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A STATISTICAL STUDY OF THE COMPLICATIONS OF MALARIA

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore Md , May 7 10, 1895

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In this paper I have endeavored to present carefully collected statistics, which establish certain facts pertaining to a number of complications of malaria That not a few of the conclusions arrived at are at variance with the pre-conceived notions of many of his readers, the writer fully realizes, but he hopes that he has not fallen into the error of basing those conclusions upon too slender evidence Everything of an argumentative nature has been excluded, in order to bring the paper within the time limit of the Section on Practice Accordingly, the article is, for the most part, a mere statement of facts and figures which must speak for themselves, and from which a few not unimportant deductions it is hoped may be drawn To the literature of the subject brief reference only has been made

The total number of cases which were analyzed and form the basis of the present paper were 2,122 Of these, 1,132 cases were furnished by the records of the Pennsylvania Hospital, extending over a period of twenty-one years (1873 to 1894 inclusive), 611 cases were furnished by the records of the Philadelphia Hospital, during eight years (1886 to August, 1894, inclusive), and 379 cases by the Episcopal Hospital, the latter occurring during the decade recently ended (1885 to 1894 inclusive) In this connection I desire to express my deep obligation to Dr Morris Booth Miller, without whose kind assistance the data obtained at the Pennsylvania Hospital could not have been procured

The notes of the cases gleaned from the records of the Pennsylvania Hospital, those gleaned from the records of the Episcopal Hospital and also those from the Philadelphia Hospital from 1889 to August, 1894, inclusive, were found to be complete enough to serve as a safe foundation for inferences, not without considerable practical value They embrace 1,780 cases of malaria These 1,780 cases were carefully analyzed with reference to their complications which were noted in 189 instances or 10.7 per cent. The cases were found to be classified, as follows:

Intermittent fever (including quotidians, tertians, quartans, etc.)	1,434
Remittent fever	75
Malaria cachexia	27
Chronic malaria and irregular types	22
Unclassified	222
Total	1,780

Again, all instances in which an element of doubt was presented by the diagnosis were eliminated. In the majority of the cases the blood appearances were given.

But though the proportion of cases of malaria in which complications arise is as great as in some of the other acute infective diseases, yet they are somewhat peculiar in character and, on the whole, not grave in nature, as may be observed by an inspection of the subjoined list, in which they are placed in the order of frequency of occurrence:

Heart disease.—Valvular heart disease	14
Valvular heart disease, comp. with albuminuria	4
Mitral regurgitation and congest. lungs	1
Mitral regurgitation—died	1
Dilatation of heart	1
Total	21
Enteritis.—Simple	16
Gastro-enteritis	3
Chronic	1
With albumin and granular casts	1
Total	21
Neuralgia.—Supra orbital	11
Intercostal	2
Anterior crural nerve	1
With ptosis and left side corneal ulcer	1
Double sciatica	1
Gastralgia	1
Facial	1
Total	18
Albuminuria.—(Marked)	14
Pleurisy.—Simple (plastic)	10
With effusion	1
With nephritis	1
With heart failure	1
Total	13
Rheumatism.—Simple (articular)	10
Syphilitic (two with systolic murmur)	3
Total	13
Phthisis.—Chronic	7
Chronic incipient	4
With albuminuria	1
Total	12
Typhoid fever.—(Typho-malaria)	8
Edema.—With anemia	2
Of feet and legs	2
Of legs	1
Of legs with abscess	1
Of feet with enlargement lymphatic glands	1
Total	7
Pneumonia, lobar.—Simple	3
Double croupous—1 with fatty heart, died	2
Total	5
Pneumonia, catarrhal.—Simple	1
Jaundice.—Catarrhal	4
Catarrhal intense with melena	1
Total	5
Nephritis.—Simple	2
Chronic parenchymatous	1
Acute and pleurisy with effusion	1
Acute Bright's	1
Total	5
Anemia	4
Dysentery	4
Syphilis (1 tertiary)	3
Goitre (1 exophthalmic and enlarged inguinal glands)	3
Erysipelas	3
Gonorrhea	3
Ascites (1 with edema of feet)	2
Hepatitis (1 chronic)	2
Paraplegia	2
Constipation	2
Hemorrhoids and lithemia	1
Biluria	1
Dyspepsia (atonic)	1
Hematemesis	1
Mal. neuritis	1
Hepatic catarrh	1
Hystero epilepsy	1
Epileptic convulsions	1
Saturnismus	1
Enlargement of thyroid glands	1
Enlarged lymphatic glands	1
Paralysis of bladder	1
Vertigo	1
Cerebral congestion with effusion into ventricles	1
Cervical adenitis	1
Follicular sore throat	1
Zoster femoralis	1
Abscess of groin	1
Phlegmasia albadolene	1
Epistaxis	1
Pericarditis	1
Hyperpyrexia	1
Toxemia	1
Cystitis	1
Typhlitis	1
Brachycardia (pulse 41 to 56)	1
Stricture	1
Alcoholism	1
Ague cake spleen	1

Some of the conditions, which have been recorded as complications, should more properly be regarded as being symptomatic indications of the malarial process. These will, therefore, not receive further consideration at present writing. Again, some of the chronic affections which have been noted as complications such as chronic valvular diseases of the heart, pulmonary tuberculosis and nephritis were, in all probability, in many instances preexisting affections, which most probably predisposed on account of their debilitating influence to malarial infection. *Per contra*, I entirely agree with the view expressed by the late Austin Flint, that there is reason to believe that malaria promotes the development of phthisis pulmonalis in those predisposed to it.

Among the most frequent complications stands neuralgia, of which there were eighteen instances (*supra*)[1] out of the sum total of cases, and eleven of these it may be seen involved the supra-orbital branch of the fifth nerve. In these investigations both pleurisy and rheumatism were found to be relatively frequent, complicating conditions, though each occurred in less than 1 per cent. of the cases. The literature of malaria contains but few allusions to the circumstance that pleurisy may arise in its course. *Whittaker*[2] states that malaria may simulate pleurisy and other diseases. I can not stop to consider the question whether or not the implication of the pleura, in cases of malaria, is dependent upon the primary infection I think it quite probable, however, that it is more frequently due to secondary infection, hence, it is to be looked upon as a genuine complication I find no mention in medical literature of the fact that rheumatism is, comparatively speaking, a not uncommon concomitant of malarial toxemia, as is indicated by the present researches

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[1] Text-book of the Practice of Medicine, 957.

[2] Theory and Practice of Medicine, 957.

Upon the question, "Has pneumonia any special connection with malaria?" the opinion of the profession is divided Physicians residing in the highly malarious districts of warm latitudes have been, since old times, and are still, describing a malarial form of pneumonia To illustrate J P Frances,[3] (Carencro, La), in an article on "Malarial Pneumonia" states "Malarial pneumonia has been very rife during this present spring, 1889 The severe type manifests itself first by several paroxysms of intermittent or remittent malarial fever Pneumonia will then set in with slight rigors followed by headache, flushed face, soreness in the chest" "Fever averages about 103½ to 104 degrees F Examination of the chest reveals an alteration in the affected side, a bruit rougher than on the opposite side A whole lobe is usually involved, beginning indifferently and in about equal proportion, either at the base or the apex

"Frequently the crepitant râle is not dry at the end of the act of inspiration, and is often substituted by bronchitic respiration"

"Percussion gives negative results or a slight alteration Sputa vary from frothy mucus to pathognomonic ones of classical pneumonia

"The paroxysm generally continues for thirty-six or more hours, the fever then abates or intermits and with it the chest troubles Should the case be intermittent, a few scattered râles will be found by auscultation, in the remittent type the bronchitic respiration is ameliorated, and we have the redux râle"

"After a couple of hours of respite, the paroxysm sets in anew, with chest symptoms much more severe, and remits once or twice again, after some thirty hours each, making the case last from the onset to the end of the attack, five or six days"

Frances further points out the fact that when cases end by death, little or no remission occurs after the second paroxysm, the condition merging into a typhoid state terminating in death He also describes double malarial pneumonias, after which he continues "I have seen a lady, multipara, with a double malarial cataleptic pneumonia The chest and nervous symptoms increased and decreased with the febrile movement, she died on the seventh day This case was of the remittent type, temperature 100 to 105 1-9 degrees F Chances in double pneumonia are half and half, and with children about three to one"

Martin[4] reports a case of malaria complicated with pneumonia, which occurred in the Montreal General Hospital In this case, which came to autopsy, the right lung was found to be in a state of gray hepatization, the organs all bile stained, the spleen not enlarged The patient was a male Indian (traveling with a circus), age 51, whose illness began with a severe rigor, lasting one hour, twelve days prior to admission (namely Oct 23, 1892) attended with fever and great sweating Subsequently, had daily recurring chills, followed by hot and sweating stages, till date of admission Temperature on entering hospital (November 4) 105½, pulse 122, respiration 36 No chills developed after entering hospital, but there was great prostration The characteristic malarial symptoms now seemed to be conspicuous mainly by their absence There was no herpes, no enlargement of the spleen or liver could be made out The respiratory system presented the most prominent local symptoms The sputum consisted of muco pus

Physical Signs—For some time these were, for the most part, anything but typical Thus the respirations were 24, costo-abdominal expansion of the chest good, tactile fremitus normal, percussion revealed no dullness Auscultation the breath sounds were harsh in both infra-clavicular regions, where, also a few moist râles were heard Elsewhere no adventitious sounds, vocal resonance normal Blood examination showed presence of plasmodium malariæ in various forms, especially the amœboid and free pigmented varieties

On November 11, the temperature was 101½, respiration 20, pulse 88 Lungs examined but found negative Two days later dullness appeared at base of right lung and crepitant râles with diminished breath sounds on auscultation Great weakness and severe dyspnea with blood-tinged expectoration soon followed The area of dullness increased, jaundice appeared, which grew quite intense Examination for bacilli negative The right lung now showed signs of consolidation from base up to the spine of the scapula Death occurred November 18 (See result of autopsy, supra)

One of the instances of pneumonia embraced in the above table of complications proved fatal It occurred in the service of Dr James H Hutchinson at the Pennsylvania Hospital The patient, a male, age 57, was admitted to the medical wards April 25, 1880 Had never been sick except during previous fall when he had ague lasting several days Three days prior to admission he had diarrhea, fever and sweating, the following day a similar paroxysm On the day of admission he had high fever about 6 A M, followed by profuse sweating after he was admitted At 4 26, fever this A M, and sweating but comfortable, 4 27, sub-crepitant râles heard, 4 28, slightly more cough with frothy expectoration, 4 29, dull under the clavicle and posteriorly over lower part of right lung The respiration bronchial Vocal fremitus and resonance increased, 4 30, died at 8 30 o'lock A M

Post-mortem rigor mortis firm Old adhesion at right apex and diaphragm Recent lymph at right base Left lung fills pleural sac Recent adhesions Few bands of recent lymph in left side of pericardium Heart contains 2 ounces cloudy serum Both sides of heart relaxed Right auricle filled with black clot Firm chicken-fat clot in right ventricle Left auricle contains chicken-fat clot extending into vessels Mitral valve atheromatous, aortic valves thickened and fenestrated Left ventricle wall thickened but softened Weight 18 ounces Left pleura contains some blood serum Right lung, anteriorly, is crepitant and in places emphysematous Border of lower lobe crepitates imperfectly Section shows lower lobe to be in a stage of red hepatization, middle in later stage and upper presents a mixed appearance Several old cheesy masses in apex, but one in middle lobe Posterior part of left lung firmer than anterior The latter is gray, firm and less elastic Two lungs weigh six pounds Spleen slightly larger Fibrous tissue increased, dark-colored Kidneys, left kidney large and irregular Large cyst near pelvis, size of plum Weight eight ounces Deeply congested Capsule slightly adherent, not thickened, leaves smooth surface Right kidney small Less congested, and on posterior surface there is a small doughy cyst and a small cyst on surface of larger one Liver, gall-bladder filled with dark mucus and bile, borders rounded, dark-colored and firm Surface somewhat homogenous Weight, five pounds, four ounces

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[3] The Times and Register, vol XX, 1889 p 345

[4] Service of Dr Stewart, Mont Gen Hospital, (Montreal Medical Journal, vol, XXI, p 900)

In a fatal case of pernicious malaria under the care of Musser at the Philadelphia Hospital, the post mortem records showed that there had been marked edema of the lungs, which had been supposed to have been the cause of death No mention was made of the presence of the characteristic lesions of pneumonia

D E English [5] in a paper on "Pulmonary Inflammation as a Complication of Malaria," contends "Sometimes at the end of the first or the beginning of the second week of a case of remittent fever that has not responded well to the usual treatment, we find our patient with a little higher temperature, a little sharper pulse, a little quickening of the respiration, a very slight occasional cough, and just a suggestion of difficulty in breathing A careful examination of the chest reveals one or more spots of beginning inflammation in the lungs This patient does not have a true croupous pneumonia, but he does have an inflammation of lung tissue occurring as a complication of remittent fever In this connection, it should be pointed out, that all the instances of pneumonia that occurred in the present series of cases of malaria, arose in the course of intermittens

The physical signs are similar to those of true croupous pneumonia, except that the dullness on percussion comes on more abruptly and is not so absolute as in true pneumonia, and probably because the air-cells are not so completely filled and the exudate is liquid The subcrepitant rale can be heard and sometimes the sounds of a coarser bronchitis As a rule, the sounds of fine bronchitis are heard only in the immediate neighborhood of the spot

"The general symptoms of remittent fever, the temperature running higher than it otherwise would, and the remission not being so distinct as usual The pulmonary inflammation subsides when the systematic disease has been brought under control "

He further states that "this complication may be mistaken for true croupous pneumonia, lobular pneumonia, capillary bronchitis, simple congestion of the lung and pulmonary edema "

Says Osler [6] "A malarial pneumonia is described and is thought to be very prevalent in some parts of this country Although I have seen during the past seven years several hundred cases of malaria, and am familiar with the bronchial troubles so commonly associated with it, I have yet to see an instance of pneumonia, which seemed in any way connected with paludism " Again,[7] he relates his personal experience with the combined occurrence of these two affections, as follows "On two occasions in the Philadelphia Hospital I had an opportunity of seeing the development of pneumonia in convalescents from malaria, one of the quotidian, the other of the quartan type They developed in a ward with several other cases of pneumonia, but the disease ran a perfectly normal course In about four hundred cases of malaria, which have been under observation at the Johns Hopkins Hospital and Dispensary, bronchitis has been frequent as an early symptom, but we have seen no indication of any special form of inflammation of the lungs "

According to the present collective investigation, out of the aggregate number of cases of malaria analyzed—1,780—only 5 cases of lobar pneumonia and 1 of catarrhal pneumonia occurred Thus, lobar pneumonia can not be regarded as being frequently in association with malaria, and yet that it is so, rarely, can not be denied, in view of the clinical and post mortem evidence at our command So far as can be ascertained from the notes of the cases, the symptoms presented were the same as those met with when pneumonia complicates other acute infective diseases, though the physical signs were, perhaps, less pronounced for two or three days after the onset Further, the results obtained by these observations are entirely confirmatory of the view expressed by Osler (supra), when he affirms that pneumonia has no special relation to malaria Now, while this is true as regards the occurrence of pneumonia secondary to malaria in Philadelphia and other temperate latitudes, it may be equally true that the severer forms of the disease, which occur in warm climates, truly invite invasion of the lung by the pneumococcus of Fraenkel

A glance at the table of complications will show that, in six of these instances, typhoid fever was noted That there is a class of cases in which both malaria and typhoid fever are met with in the same individual, simultaneously, can not be doubted In view of the results, however, obtained by these researches, that relationship can not be close Neither is the compound affection due to a third extraneous "compound agent," as was formerly believed, but to the effects of the two pathogenic organisms in one body at the same time The hybrid occurs most frequently in the malarious regions of our Southern States I hold that a careful blood examination in suspected typho-malarial fever would show many instances to be pure typhoid fever The presence of chills and sweats and an intermittent temperature curve are sometimes observed in typhoid Furthermore, when the temperature curve is of the intermittent type, from the beginning, the course of the affection is usually favorable This fact tends to make clear the meaning of Woodward's statistics, which show "that the mortality of uncomplicated typhoid was far greater among the white and colored troops alike, during our late Civil War, than was the mortality of typho malarial fever "

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DISCUSSION

DR ROCHESTER—This subject of the connection of malaria with other forms of disease is one of exceeding interest to us all There is one thing I should like to ask the doctor He speaks of the complication of malaria with pleurisy I should like to know whether he has notes in the cases in which that occurrred and whether the majority occurred on the left side or not Also, in pneumonia, he mentioned that one case was on the right side I think there is some possible explanation offered for its occurrence on the left side in connection with the spleen I am glad he spoke of the fact that true lobar pneumonia was so exceedingly rare in the malarial fevers, but that we did have very commonly a complication of the respiratory tract principally confined to the bronchial tubes, with occasional true bronchial pneumonia or lobular pneumonia associated with it It seems to me that careful discriminations should be made between what we call true lobar pneumonia and broncho pneumonia in all cases, a thing which is frequently overlooked when people speak of pneumonia The complication of typhoid fever with malarial fever is of interest, and also the fact the Doctor has brought out, and which should be particularly emphasized, that we do have cases of typhoid fever in which the temperature remits, in which there is no malarial complication whatever We should not describe a case of typhoid fever as malarial unless we actually find in the blood the plasmodium of malaria

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[5] Abstract of a paper read before the Orange Mountain Medical Society August 14 1891 Medical Record, March 11, 1893, p 297

[6] Practice of Medicine, p 554

[7] Loc cit p 146

Dr Hollister—In the early years of my medical practice I came directly in contact with more cases of malarial complications than all others combined, and among a class of people who had not been theretofore exposed to malarial influence and therefore in whom we could trace easily the depressing influences and constitutional effects of the presence of malaria Universally it was found—although we knew nothing of the plasmodium of malaria—that one of the manifestations most marked in connection with these diseases was the destruction of the red blood corpuscles The first summer I had no trouble with malaria, and my patients responded readily to the usual remedies When in November and December I came to see these persons subjected to the low temperatures and to the other influences incident to the winter, I began to find a series of manifestations, which took the form very largely of an epidemic of congestion This even took the form of cerebro-spinal meningitis, with fatal results The second year, however, the manifestations were not upon the nervous centers, but more markedly they were pulmonary complications Why in those two years the complications were so different in the same locality I can not say The second year in almost every instance there were catarrhal manifestations, and then very rapidly a series of others in which there were infiltrations into the lungs Large numbers of cases were fatal Some of these cases were accompanied by pleuritis complication, but perhaps not more than 10 per cent There were cases in which there was dullness, first posterior, and then extending gradually from the base and involving more and more of the respiratory tract areas, with fatal results in the manner I have indicated, and it had seemed to me that the inflammatory phenomena of that form of inflammation of the lungs were due to the great destruction of blood corpuscles and the enfeeblement of the body If there are present any cocci or tubercle bacilli, they here met with the conditions most favorable for their development In proportion as the blood was improved, resistance was more manifest, and favorable results could be obtained in the treatment I have the impression that where the plasmodium is not present, you will not find any relation between malaria and tuberculosis I am convinced that where the plasmodium of malaria and the tubercle bacillus are both present, either one will prepare the way for more serious manifestations on the part of the other

Dr Anders—As to Dr Rochester's question with reference to the relative frequency of the occurrence of pleurisy on the two sides, I can not reply in positive terms, as the cases were not studied with regard to this point, although I think this might have been done with great advantage I may say that my recollection is very clear as to the variety—clinical and pathological—or that most of the instances were cases of plastic pleurisy, there having been only a few in which sero-fibrinous exudations occurred to any extent Dr Hollister made the point that season influences the character of the infection I do not doubt that this is true, and more especially do I believe that the winter season predisposes a patient suffering from malaria to pulmonary complications in particular If my recollection serves me, this was true of the cases which occurred in Philadelphia, so far as this complication was concerned We must remember the fact, however, that both forms of pneumonia are on the whole much more frequent during the winter than the warm season of the year He also made the statement based upon personal experience that the epidemic varied as regards the character of the complications Now in Philadelphia this disease does not occur in epidemic form, at least not to any extent among the cases that are admitted into the hospital The statement made by Dr Hollister, however, simply confirms a well-known fact with reference to all other acute infectious diseases, namely, that not only the type of the infection, but also the character of the complications, varies to a very great extent in different epidemics I think I have shown clearly enough that typhoid fever and pneumonia do not bear any special relation to malaria The fact was also forcibly brought out that pleurisy and rheumatism are, comparatively speaking, frequent complications of malarial infection This is of interest from the fact that we do not find any reference to the connection either in our text-books or in the literature

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CONSTIPATION AND FAULTY ELIMINATION AS A FACTOR IN DISEASE

Read in the Section on Practice of Medicine at the Forty sixth Annual Meeting of the American Medical Association at Baltimore, Md , May 7 10, 1895

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The retention of fecal accumulations in the alimentary tract, and their discharge but once a day is an acquired habit Primitive man, like other unrestrained animals, defecated more often

The result of retaining within the body matter so poisonous, can not be other than prejudicial to health

Man, the most perfect of animals, intellectually far in advance of all others, is nevertheless ignorant as to what food he should select The result of this is imperfect digestion, constipation and faulty elimination Each largely depends upon the other. Viewed from the standpoint of digestion, (intestinal,) let us briefly consider this important process

We are told that "harmony of the secretions means normal cell selection, and normal cell selection means health " Any deviation from these relations means "cell disturbance, or disease "

The digestive changes in the small intestines may be summed up as follows proteids are converted into peptones by pepsin and trypsin, because albumins are not readily absorbed by the circulatory and lymphatic systems

We have also been taught that peptones can not exist in the blood as peptones, without poisonous effect, but must be converted back into their native albumins (proteids) The pepsin of the stomach begins the process of digestion Trypsin of the pancreas completes it, carrying it a step further, producing leucin and tyrosin Then comes absorption, etc. Thus, cane sugar is converted into grape sugar, by invertin from the crypts of Leiberkuhn Steapsin of the pancreas is the active agent in the emulsification of fats The liver cells are called upon for bile to assist in their absorption If we study intestinal digestion, we readily see the important function of the liver in the process, as well as the importance of a portal circulation which is unimpeded

We are taught that "any interference with the pancreatic cells would interfere with the proper solution of proteids into peptones, and the formation of leucin and tyrosin A modified product of digestion would be taken to the liver, and the liver cells could not convert them properly into urea " Interference with the action of the liver cells would produce autoinfection, and its symptom would be non-elimination

What would be the effect upon the normal cell activity, in the process of intestinal digestion, of blocking up the lower end of the tube (the bowels)? Would we not have modified cell activity, and would not materials that were poisonous be crowded into the circulation, and if in sufficient quantities, would not this produce death?

When ptomaines, leucomaines, ferments and chemic derivatives of digestion are considered, we see how important cell selection becomes in the normal functional activities

Since our profession have been so assiduously studying the microorganisms which are about us, upon the supposition that our diseases come from without, we have forgotten that the microorganisms which dwell within, whose names are legion, are being neglected

How important it is, therefore, to prevent accumulations of effete materials within the intestinal tract Brunton attributes the "depression, lassitude and dullness after a full meal, in the full fed, inactive man, to peptones in the blood" Ought we not likewise to attribute many forms of disease to constipation and the faulty elimination of poisonous material from the alimentary canal'

Our food consists of proteids, carbohydrates, hydrocarbons salts, and water In their preparation in the alimentary tract before absorption, certain chemic changes take place This requires normal functionation, or especial selective acts If all alimentary substances were taken up by the blood, death would undoubtedly ensue Hence the importance of normal cell selection during secretion absorption or elimination Poisonous substances are formed, which, if retained in the tissues would become a source of infection The cells would poison themselves by the products of their own metabolism

Should the pancreas fail, in its cell selection, to produce trypsin from the blood by reason of any interference, a modified product of digestion would be taken to the liver Urea would appear in the circulation, and symptoms would arise, which, if not eliminated, would be followed by dangerous results

Bouchard informs us that sufficient poisonous matters are formed in the intestines every day to produce death should they be absorbed into the circulation

Many of the so called "diseases of the nervous system," arise solely from auto infection, and require nothing but corrected digestion and proper elimination Thus many febrile diseases during the months of autumn become grave only because of retained fecal infection

We can truthfully say, therefore, that constipation and faulty elimination are important factors in disease

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CIRRHOSIS OF THE LIVER

CLINICAL AND PATHOLOGICAL DIFFERENTIAL DIAGNOSIS, WITH CASE

Read before the Chicago Pathological Society, Feb 11, 1895

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Patient was a Norwegian, married, 48 years old and a laborer Under observation thirty-four days Previous diseases measles, colds, pneumonia four years ago Family history negative Personal history in Chicago twenty-three years, married twenty-two years, three healthy children, smokes and chews, drinks moderately, venereal history denied Present disease ill for three weeks beginning with pain in epigastrium and hypochondria, which is at times absent, now dull, now shooting into both shoulders, dizziness on walking, weakness with pain in lumbar regions, no pain on inspiration, has not vomited, no hematemesis, eats less frequently because of pain produced in epigastrium, during past month has emaciated rapidly, bowels regular, appetite good, never jaundiced, occasional eructations of gas, coughs a little in the morning

Physical examination considerable emaciation, muscles flabby, mind clear, eyes negative, tongue clean, mouth negative, lungs negative Heart systolic blowing, apical murmur, diagnosed accidental No marked atheroma Pulse somewhat quick but rhythmic frequency varies from 80 to 104 The morning temperature averaged 99 degrees, the evening 101 degrees, preserving this type with fair constancy Four evening elevations of 101 8, 102, 102 2, and 102 2 were observed Urine negative, not bile stained Feces normally pigmented Stools irregular in frequency, constipation alternating with slight diarrhea Nervous system negative

The liver conformed to the normal contour above, moving freely on respiration, it extended three inches below the usual inferior limit, the enlargement being symmetrical The edge, not readily palpable because of tenderness, seemed even The hepatic tenderness and epigastric pain were constant There was no conspicuous tympany The splenic dullness was always uncertain, as the organ was never palpated and constipation was frequent Lastly, the skin of the patient was dry and muddy, and his appearance cachectic No icterus was observed Neither hydrochloric nor lactic acid was present in the gastric juice

The blood count gave 1,104,000 red blood corpuscles, and the red corpuscles sustained to the whites a ratio of 1 to 174 Later counts showed gradual reduction in the number of red corpuscles to 3,800,000, while the leucocytes were to the erythrocytes as 1 to 125

The patient for several days prior to death was delirious and vomited The treatment was directed chiefly to his cough and nausea Antisyphilitic treatment was given The diagnosis would have been Laennec's cirrhosis in the first stage, had there been collateral circulation, a caput medusæ, ascites, splenic tumor or any gastro intestinal hemorrhage Hypertrophic cirrhosis was considered but rejected because no spleen could be found and icterus was absent, although that form of biliary cirrhosis, known among French authors as hypertrophic cirrhosis without icterus, was thought of and discussed in the clinical conferences The rapid emaciation suggested neoplasm and the leucocytosis looked toward some suppurating focus, although no confirming facts were established

The autopsy showed little outside of the liver The aorta and the peripheral vessels were atheromatous Heart negative, lungs, marginal emphysema, few adhesions and ancient healed tubercular foci The liver weighed 2,730 gm, there were a few perihepatitic adhesions, the organ measured 29 x 19 x 20 x 8 5 x 5 5 cm The capsule was here and there thickened, but the edges and surface were perfectly smooth On section the lobules appeared quite large, some measuring 1 cm across The color was mottled yellow and red The organ was firm and had a waxy appearance simulating amyloid The spleen weighed 420 gm and measured 15 x 12 x 6 cm The kidneys weighed 530 gm, and measured 14 x 8 x 4 cm The capsule peeled very readily, and the markings were fairly distinct The cut surface was dark and very vascular, the kidney of passive congestion On microscopic examination is found an increase in the inter- and intralobular connective tissue of the liver Round cells are found in every part of the lobule and in some places the lobule is wholly replaced by them The liver cells are now larger than normal, now atrophic, never fatty nor pigmented The bile ducts are increased Occasionally a very large lobule is found

The most interesting pathologic feature in this case is the status of the cirrhosis, whether it is the first stage of a Laennec's cirrhosis, an hypertrophic alcoholic cirrhosis, a biliary cirrhosis or a mixed cirrhosis It is certainly not a typical Laennec's cirrhosis

A consideration of the possibility that the vulgar hepatic cirrhosis may be preceded by hypertrophy, is pre-requisite Todd[1] claims that there is never preliminary enlargement in Laennec's cirrhosis and he was unable to find in literature a reliable instance of a hypertrophic passing into an atrophic cirrhosis Stricker (Traube's clinic) observed livers shrink to half their former length in one month Therefore subacute and acute hepatitis must be excluded Rosenstein[2] and Labadie Lagrave[3] agree with Todd Bright,[4] Budd,[5] Saunders and Frerichs[6] have said that contraction is occasionally antedated by a stage of enlargement Murchison's[7] experience taught that in a considerable proportion of cases of cirrhosis, the liver is still very much enlarged, often from fat, after symptoms of portal obstruction have set in and that patients often die in this stage with jaundice, hemorrhage and symptoms of blood poisoning Leudet,[8] from a *pathologic standpoint comes to the* conclusion that increase in liver volume is not always an index of a recent lesion, of an acute process or a curable one Murchison says it is questionable whether such livers would shrink if the patient lived longer, yet he states that increase and decrease in liver volume are probably different stages of the same process Ollivier[9] believed that cirrhotic atrophy and cirrhotic hypertrophy were different states Gilbert and Hanot believe in the preliminary enlargement of cirrhosis atrophica Semmola and Klebs have studied the disease in its incipiency and found that the organ is firm, smooth and dark, with dilated portal radicles and periportal extravasation of round cells (Tissier) Keussner[10] Rokitansky, Stadelmann,[11] Litten,[12] Schapiro,[13] Mangelsdorf,[14] Niemeyer,[15] Stricker, Strumpell,[16] Hamilton,[17] Orth and Zeigler describe enlargement antecedent to atrophy Bamberger[18] considers the decrease in size of an enlarged liver almost pathognomonic for atrophic cirrhosis Rosenstein applies two tests, palpation of the liver's edge, continued clinical observation and necropsy—ascites, obstipation or tympany render percussion most uncertain With these criteria Rosenstein has never seen atrophy following hypertrophy

Definition of term "hypertrophic" — Hamilton[17] takes exception to the term "hypertrophy," arguing that an enlarged liver may be very atrophic Liebermeister considers that the terms "biliary" and "hypertrophic" are not identical, nor are venous and atrophic cirrhoses one The portal vein form usually shrinks and the biliary form usually enlarges, but exceptions occur as, 1, portal vein forms remaining large till death, or 2, biliary types atrophying to a certain degree

Most writers, *e g*, Strumpell, regard "biliary" and "hypertrophic" as synonymous, and "venous" and "atrophic" as the same The hypertrophic alcoholic cirrhosis of Hanot and Gilbert[18] is characterized by edges less sharp than normal, red or brown color; surface furrowed by uneven areas, varying in size, the unevenness being less than in the atrophic form; by granulations on the surface, by enlarged spleen, ascites, collateral circulation, etc They assert there are many transitional forms between it and the atrophic alcoholic cirrhosis, so that great importance does not attach to size alone Recovery occurs in this more than in any other form

Laennec seems to have known but one type of cirrhosis Hanot, supported by Hayem, Cornil and Charcot, insisted even more than did Todd upon the divorce of hypertrophic and atrophic cirrhoses This separation of the two forms is the constant theme of the French school, but they do not seem concerned as to whether an enlarged liver may become small.

Cornil[19] was the first to discover in the hypertrophic form, a very rich network of bile vessels and upon this Hanot based his clinical division of cirrhoses into, 1, the venous, and 2, the biliary Litten and Mangelsdorf sought to show that biliary was but the first stage of the vulgar cirrhosis plus icterus. In Germany, the different cirrhoses are largely held to be mere variations of a single fundamental cirrhosis Stadelmann[11] voices this opinion when he can not find a difference between the two forms for the following reasons 1, there is a hypertrophic cirrhosis without icterus, 2, hypertrophic cirrhosis can later atrophy, 3, icterus can be very marked in Laennec's cirrhosis

Rosenstein suggests three classes of cirrhosis 1, the genuine contracted liver, the cirrhosis of Laennec, an analogue of the genuine contracted kidney.

2 The hypertrophic icteric cirrhosis, an analogue of the parenchymatous nephritis

3 The hypertrophic mixed form, in which hypertrophy and atrophy combine, an analogue of the secondarily contracted kidney

Ackermann distinguishes an atrophic cirrhosis (Laennec's) in which the cells die first and are replaced by connective tissue According to him, Laennec's cirrhosis and one variety of large cirrhotic liver are the same, for in certain livers some parts are atrophic and others again are hypertrophic Ackermann admits the identity of the French hypertrophic variety which has, he states, nothing in common with the atrophic cirrhosis except the connective tissue proliferation It is apparently a primary connective tissue hypertrophy with consequent atrophy of liver cells, a hypertrophy occurring *around* the interacinous blood vessels, *never* leading to characteristic granulations, producing *moderate or no stasis, i e, scanty ascites* and *insignificant* splenic tumor, and occurring also in horses, fowls and cattle, while the atrophic is seen in man only The difference between this form and Charcot's description is obvious

Charcot drew such sharp lines between the different forms that, as Rosenstein has said, one would conclude that a glance through the microscope would readily differentiate them Charcot described

1 *Cirrhose d'origine biliare*
2 *Cirrhose d'origine veineuse*
3 *Cirrhose monocellulaire*, characterized by the presence of connective between individual cells within the lobule, seen especially in hereditary syphilis

The French school postulates the following differentia between the two types of cirrhosis in the venous variety, the connective tissue and inflammation extend around several lobules, sending in connective tissue processes late, if at all, into the lobule, hence a peripylephlebitis, in the biliary type, the connective tissue begins *in* the lobule, around the smaller bile radicles, with increase in the biliary vessels, hence a primary angiocholitis or periangiocholitis In the venous form, the connective tissue exerts compression upon the lobule *en masse*, hence called cirrhose multilobulaire s annulaire in biliary cirrhosis, the compression is *in* the lobule hence denominated cirrhose insulaire s monolobulaire In the vulgar cirrhosis the process is extralobular in biliary, it is extra- and intralobular In the venous or portal type, the liver is small, ascites is present, there is no icterus and the liver cells are degenerated in the biliary form, the liver is large, ascites and other expressions of stasis are absent, icterus is the cardinal symptom and the liver cells are intact, a pathognomonic criterion

To my mind the differential diagnosis demands elucidation of the following points 1, distribution of the connective tissue, 2 status of the bile ducts, 3, character of the new-formed connective tissue, 4, condition of the liver cells, 5, blood vessels, 6, size of the liver 7, bile stasis 8, venous stasis 9, classification

1 *Distribution of Connective Tissue* —This point is the most confusing of any connected with the differential pathology Rosenstein rejects Charcot's and Hanot's terms, "intra and extralobular," 'multi- and monolobular," and asserts that there is no cirrhosis in which there are not now some small lobules surrounded by connective tissue and again many acini surrounded by connective tissue Both distributions may occur in a single liver In the annular and insular forms Rosenstein finds an actual histologic differential point, and the concentric ensnaring of smaller or larger groups of lobules in typical cases of Laennec's cirrhosis are to him and Ackermann truly distinctive In typical hypertrophic cirrhosis, the connective tissue sends out processes into and around the lobules, now surrounding an entire lobule, now only certain cell groups Rosenstein, Kelsch and Wannebroecq certainly overdraw the situation in saying that nearly all cirrhoses are mixed types (Type mixte of Dieulafoy[20] and Guiter[21] See also references [22], [23], [24]) Orth[25] refuses to divide cirrhosis into different types upon the distribution of connective tissue in regard to the lobule When said tissue seems to surround lobules, the appearance is usually accidental The same liver may show multilobular islets, large and small monolobular islets Regarding the relation between parenchyma and interstitium, the same specimen may show here a sharp distinction and elsewhere the connective tissue running into the lobules Orth regards all cirrhosis as essentially the same process. Hamilton also thinks Charcot's and Gombault's views extreme

Brieger[26] and Sabourin[27] affirm that the connective tissue begins in the hepatic vein zone French authors find the connective tissue around the bile vessels, the veins being involved later and to a less extent Hamilton says the secondary connective tissue bands into the lobule are more numerous in biliary than in atrophic cirrhosis

2 *The Bile Ducts* —In general, the French authors describe a hyperplasia of the biliary passages in biliary cirrhosis Brieger finds in every circumscript connective tissue formation in the liver an increase in the bile vessels, in tuberculosis, carcinoma, adenoma, gregarinæ, distomata, and even in corset liver Rosenstein states that he has found them (perhaps by accident) more frequently in atrophic than in biliary cirrhosis and can not, therefore, consider them pathognomonic of biliary cirrhosis, also that they sustain no causal relation to icterus The ducts are described as filled with degenerated and desquamated epithelium and less frequently with pigment masses Rosenstein affirms the existence of this condition in the hypertrophic cirrhosis without icterus Ackermann[28] thinks the new formed bile vessels communicate with the smallest biliary vessels on the one hand, and with the main duct on the other, and gives as proof the results of artificial phosphorous cirrhosis Orth considers the canal system as due, chiefly at least, to atrophic liver cells arranged in rows, although he admits they may in part be neoplastic They can be infected from the biliary system and are absent in no type of cirrhosis (Also the view of Kelsch, Kiener, Sabourin)

Friedlander[29] was the first to discover this reversion of atrophic liver cells to their embryonal duct-like condition The ducts disappear where the connective tissue is densest According to Price[30] the ducts are of two kinds 1, true bile ducts, 2 duct like structures continuous with and imbedded in large tracts of fibro nucleated tissue, being transformed into fibrous tissue Small nodules on the surface are occasionally due to biliary polyadenomata[31] Ziegler describes a bile vessel proliferation in all cirrhoses

Character of the new formed Connective Tissue — Ackermann calls attention to the fact that the new-formed connective tissue in biliary cirrhosis remains uncontracted, hence the names elephantiasis hepatis (Eichhorst) and L'hypermegalie (Schachmann) In atrophic cirrhosis it is fibrous, in hypertrophic, embryonal in character (Rosenstein) Stadelmann remarks that the biliary cirrhotic liver never contracts Orth admits that a biliary form exists, characterized by its clinical course and lack of atrophy, with the qualifying phrase that the future only can assign to biliary cirrhosis its exact status Strumpell thinks the lack of contraction has been overestimated and that the organ would contract, were life protracted Hamilton describes the connective tissue bands as finer in hypertrophic than in atrophic cirrhosis

4 *Condition of the Liver Cells* —That the liver cells preserve their form is characteristic of biliary cirrhosis They are at most flattened only at the periphery of the lobule and may disappear Fatty infiltration and necrosis is said to be very rare The nuclei are preserved The cells are sometimes pigmented or atrophied but often both cell and nucleus hypertrophy and divide In Laennec's form the cells are often degenerated, very frequently fatty, now in the center, now in the periphery of the lobule Hamilton says fatty degeneration is rare even in Laennec's cirrhosis, while fatty infiltration and hypertrophy occur

5 *Condition of the Blood Vessels* —The interlobular blood vessels in the portal cirrhosis are diseased, while free in the biliary type (Rosenstein) Ackermann's view has already been quoted (v s) The integrity of the hepatic or sublobular system is, according to Jaccoud,[32] quite exceptional

6 *Bile Stasis* (*Icterus*) —Icterus dominates the clinical picture in the biliary variety Most author-

ities admit that jaundice occurs more frequently in biliary cirrhosis, although it may be absent[33] Howard found icterus in 70 per cent of hypertrophic and 71 per cent in atrophic cirrhosis Mangelsdorf found icterus in thirty-eight out of forty-nine cases of hypertrophic cirrhosis Fogge (quoted by Charcot) found it in 25 per cent of atrophic cirrhosis (130 cases) and Rosenstein in 15 per cent Icterus is absent in the cirrhose hypertrophique graisseuse (Sabourin) In Laennec's cirrhosis, it is incomplete, caused by compression of bile ducts by contracting connective tissue Its frequency is variously given, seldom (Murchison, Oppolzer and Charcot), frequent (Bamberger, Leyden, Furbringer), necessary to the diagnosis (Leyden[34]), slight in degree (Frerichs, Keussner), coming on before severe symptoms (Bright) In hypertrophic biliary cirrhosis some consider the icterus due to polycholia (Rosenstein, Labadie Lagrave)

In atrophic cirrhosis, jaundice is a genuine complication, due to catarrh, glands, or a diffuse cirrhotic process (Andral, Clin Med, II), yet few pass through the disease without a muddy yellow areola under the eyes In hypertrophic cirrhosis the stools remain yellow, an important point (Furbringer, S 121 ref 2), yet sometimes they are acholic (Liebermeister 2) Stadelmann believes many of Charcot's cases of biliary cirrhosis were only instances of retention icterus (from calculi, cicatrices, etc) Rosenstein has observed catarrhal icterus lasting between one and two years and has seen three cases of amyloid with icterus In biliary cirrhosis the icterus varies directly with the fever curve and the size of the liver (Jaccoud)

7 *Venous Stasis*—is absent or inconsiderable in biliary cirrhosis, being terminal or complicating It is present in the mixed forms (biliary plus venous) In advanced cases of atrophic cirrhosis, ascites is rarely absent, yet the patient may die before ascites develops, *e g*, from hemorrhage, for hemorrhage is dangerous when there is no ascites (Leyden) An extensive though slowly developing collateral circulation may permanently relieve ascites Ascites is no infallible sequence of atrophic cirrhosis (Lecorché, Hanot) It may disappear after hemorrhage (Fauvel), diarrhea (Linas) or carcinoma of esophagus (Lecorché, Telamon) It usually antedates edema of the legs, although anasarca may appear first from 1, renal or cardiac complications, 2, compression of inferior vena cava, 3, perihepatitis involving cava, 4, cachexia 5, thrombosis of iliac veins Splenic tumor is seen in both forms Atrophic cirrhosis is accompanied by mechanical gastro-intestinal stasis with hypostatic hemorrhage In biliary cirrhosis, hemorrhage in other situations, *e g*, epistaxis, is more frequent Furbringer has, however, observed in biliary cirrhosis, hemorrhagic gastritis and enteritis The metabolic disturbances are the same in both forms, except that alimentary glycosuria is more frequent in the atrophic In Laennec's type, constipation is the rule, in biliary, diarrhea In both, dilatation of the right ventricle, leucocytosis, remittent or intermittent temperature occur Tubercular peritonitis and granular kidneys are common in the atrophic form, while rare in the biliary In biliary cirrhosis, albuminuria is infrequent while a high pulse rate and a terminal cholemic condition are usual

CLASSIFICATION

I suggest the following classification, less as an arbitrary or infallible scheme than as an attempted tentative reconciliation of conflicting clinical and pathological data awaiting stricter future analysis

- Cirrhosis hepatis
  - I Capsular
    - *a* Chronic perihepatitis
    - *b* Portal vein syphilis
  - II Vascular
    - *a* Hepatic vein
      - 1 Stasis cirrhosis (cyanotic in duration)
      - 2 Cirrhosis (in Laennec's cirrhosis also, Brieger and Sabourin)
    - *b* Portal vein
      - 1 Laennec's cirrhosis or atrophic cirrhosis
        - 1st Stage Pseudo hypertrophy
        - 2d Stage Atrophy
      - 2 Hypertrophic alcoholic cirrhosis, like Laennec's, only remaining large
  - III Biliary
    - *a* Obstruction—"Retentions icterus" and cirrhosis
    - *b* Biliary or hypertrophic, in French sense Hanot's cirrhosis
      - 1 With icterus
      - 2 Without icterus
  - IV Mixed (Vascular and biliary cirrhosis)

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HYPERTROPHIC CIRRHOSIS OF THE LIVER WITH JAUNDICE

Read before the Chicago Pathological Society, Feb 11, 1895

BY T J WILLIAMS, M D

HOUSE PHYSICIAN COOK COUNTY HOSPITAL, CHICAGO

The patient who died of this affection at the County Hospital last January, was a white woman of Irish extraction, 40 years old, married, having several living healthy children, and an exceptionally good family history She had malaria and rheumatism several years ago but neither of these confined her to her bed, and she considered that she had had unusually good health up to one year before she came into the hospital, when she first noticed a dull heavy pain in her right side, about the border of her ribs, and became jaundiced But all the symptoms of this attack passed away without any treatment, and she felt fairly well except for occasional vomiting spells, until toward the end of November, when she was again attacked with the same dull pain in the region of the liver and became yellow

December 21, she came to the hospital and stated that she had been sick for five weeks, she complained of pain and tenderness in her right side, but was most concerned about the yellowness of her skin and a tumor of which she had lately become conscious in her abdomen Her temperature on admission was 100 8, her pulse 106 and respiration 32 She did not appear to be very sick She was extremely stout and apparently suffered no pain She recited her history intelligently, appeared to have been a virtuous woman not addicted to drink, and free from any venereal history Her skin and conjunctiva were yellow at first not very marked, but became extremely so toward the end—otherwise her skin and eyes were negative, but she complained as she grew worse that her sight was getting poor, and some time before death had diplopia Her breathing was accelerated and shallow, her pulse weak and rather rapid but neither lungs nor heart gave any other sign of disease Her abdomen was very prominent but symmetrical The tumor of which she complained was easily palpable Its smooth rather sharp edge, could be felt in the median line running down into the right iliac region Slight pressure upon it caused pain Owing to intestinal tympany and a very thick layer of fat overlying it, the spleen could not be palpated or percussed No fluid could be shown to be in the peritoneal cavity, and there were no enlarged abdominal veins although there was some edema of lower limbs She gave no history of any pelvic trouble except profuse menses during last two periods before admission and there was no tenderness over the pelvic viscera As the jaundice deepened, she complained of a "dead feeling" in her arms and legs which became very weak and later she had "drop wrist" of both arms and complete paralysis of lower limbs Her intellect became dulled She was occasionally delirious, but control of the bladder and rectum was retained to the end There was at no time any gastric disturbance, she retained her food and medicine well, but her bowels were extremely constipated and would not respond to any but strong cathartics Her urine at no time contained any albumin or sugar It was generally of a low specific gravity, acid reaction, dark color, and gave a marked biliary reaction Her pulse was not at any time slow, generally between 90 and 110 Her temperature varied between 98 and 102 until immediately before death it went to 103 4 For about forty eight hours before death she was stupid and semi-comatose and died four hours after the onset of deep coma

A post-mortem examination of the body was made twenty-four hours after death occurred There were no scars, eruptions or ecchymosa on the body but the skin was intensely yellow There had been no emaciation The abdominal wall contained 32 cm of fat at the umbilicus There was no fluid in either pericardial or pleural cavities The heart was covered almost everywhere with fat It was empty, weighed 550 gms, and was so flaccid that when held by the great vessels, with its base upward, it fell like a mushroom over one's fist There was neither incompetency nor stenosis of any value The cavities of the heart and the thickness of its walls, were of normal dimensions The aorta at its beginning had a few soft, small, whitish-yellow atheromatous patches—but no where else was there found any arterial degeneration Both lungs were negative, except that considerable blood and mucus could be expressed out of the lower lobes on both sides, but sections of these would crepitate and float The pleural cavity on the right, contained many firm adhesions while there were a few stringy bands also on the left The peritoneal cavity contained a few ounces of fatty serous fluid

Pushing them aside the intestines disclosed the right lobe of the liver running from the crest of the ilium with its left edge in the median line and reaching the lower border of the third rib above While the left lobe reached about 24 cm, below and to the left of the tip of the sternum, and was adherent to the spleen, the hypertrophy was seen to be mainly in the right lobe The common bile duct was patent The gall bladder was of ordinary size but rather thick, and contained some thick, syrupy brownish yellow liquid which could be expressed into the duodenum with very slight pressure The liver weighed 1,150 gms, its right lobe measured 33 cm, from above downward, 23 cm laterally, and was 18 cm thick Its surface was smooth, mottled, brownish-red and light yellow On anterior part of right lobe was a thickening of the capsule indicated by a small whitish area with white lines radiating short distances from it A cut section appeared yellow, being deeply bile stained, its surface felt rough, the lobules could be distinguished only by a slight elevation of their border The spleen was adherent to the stomach, diaphragm and left lobe of the liver The capsule was torn in an effort to detach it and its pulp substance, was so diffluent, while the trabeculæ were extremely friable, that its contents escaped into the peritoneal cavity The spleen reached about two inches below the costal arch, and up to the upper border of fifth rib Both kidneys were enlarged The capsule of each peeled readily, leaving a smooth surface The cortical markings were indistinct in each, while the pyramids were dark in contrast to the somewhat pale cortex They were bile stained like all the other visceral organs and weighed together 560 gms

The pelvic organs were matted together by old adhesions into one solid mass, the left Fallopian tube, which had extremely thick walls, contained a few drops of inspissated whitish pus The meninges were negative, as was also the surface of the brain which was not dissected Nothing abnormal was found in the alimentary tract Sections of the liver hardened and stained with hematoxylin and eosin and examined microscopically show that the lobular outlines are indistinct, and that while there is some increase of interlobular connective tissue it is not nearly as marked as in any ordinary form of atrophic cirrhosis There is marked increase of this tissue within the lobules In some it runs at right angles to the periphery from the center, disposing the cells radiating in rows from the center, in others it is arranged in circles, so that the cells are arranged in layers concentric to the periphery, at the outer parts of the lobule This latter distribution seems more common than the former In a few lobules the connective tissue is irregularly distributed so that they are made up of isolated groups of cells With a 1½ inch oil immersion objective this connective tissue is seen to be made up of a highly refractive, hyalin appearing substance containing a few spindle-shaped nuclei and, as a rule, stains well with eosin This connective tissue is best seen in areas where marked fatty degeneration has taken place Here it is almost transparent and does not take eosin well The cells of Kuppfer, marking the position of the blood capillaries, are infrequent

The most marked increase of connective tissue is seen where sections of bile ducts are obtained Here there are broad bands that stain well with eosin, and contain many spindle cells with long pointed ends The bile-duct epithelium stains very deeply everywhere There seems to be an excess of bile ducts only in a few places The increase in connective tissue is more marked around the ducts than around the hepatic or 'portal veins, and it is more hyalin in character around the ducts

The liver cells show marked signs of two kinds of degeneration, a fatty and a hyalin degeneration The first should perhaps be called a fatty infiltration, because in the cells which are occupied by the holes left after the fat had been dissolved out, the nucleus remains well stained in the periphery, while the circular vacuole is partially surrounded by a narrow rim of cell protoplasm This fatty infiltration affects all the lobules, more or less, and is so marked in some places that but a few cells are left

Where the hyalin degeneration occurs, the cells stain very poorly even with eosin, the nucleus appears faint or not at all There is no nuclear pigmentation Some of the cells contain a golden yellow pigment, which appears a yellowish brown where the granules are large Some lobules are occupied entirely by this degeneration, while in other lobules it is mixed with the fatty infiltration It is everywhere most marked in the periphery of the lobules In places this degeneration appears to have been caused by deposition of pigment, in other places it seems to be due to the fine connective tissue network which isolates groups of cells from the rest of the lobule

The liver cells which stain well often possess two nuclei In some, these lie close together upon the same plane, but no connecting bands indicating karyokinesis can be made out While some of the cells appear larger than normal, no measurements have been made Some areas are seen which show hemorrhage, but they are small and infrequent and resemble spots of red atrophy In still other places, there are spots of leucocytosis This occurs usually in areas of marked degeneration where liver cells have entirely disappeared, leaving only a network

The microscopic examination was made in the laboratory of Rush Medical College, under the direction of Mr E R Le Count, to whom I am indebted for valuable aid

DISCUSSION

DR E R LE COUNT—I was very much interested in Dr Edwards' paper in which he gives the views of the various authorities upon different forms of cirrhosis, and we know there is a great conflict of opinion in regard to this matter The opinion of Rosenstein, which he mentions as having been advanced in the Congress of Internal Medicine, held at Leipsic, in 1892, of dividing cirrhosis into the atrophic form, the hypertrophic form with icterus, and the hypertrophic form without icterus, in which the latter is associated with the formation of connective tissue atrophy, is the most rational division that can be made The liver is possessed of a great degree of power to regenerate itself, and experimental investigations upon animals have shown that this power is possessed by it to such an extent that an entire lobe may be regenerated It is this property of regeneration that has given rise to so much discussion as regards the forms of cirrhosis In this division of Rosenstein, the hypertrophic with icterus, and the atrophic and hypertrophic without icterus, in the use of the term biliary, with cirrhosis, it must not be forgotten that biliary cirrhosis may be atrophic in many cases, as was mentioned in the statistics given by Dr Edwards In most of these cases of biliary atrophic cirrhosis there is chronic obstruction of the gall duct, and the atrophy of the liver is secondary to the obstruction of the gall duct In biliary hypertrophic cirrhosis, obstruction does no usually occur, but it does take place in the biliary atrophi form by gall stones very frequently I have had the oppo tunity of looking over the specimen presented by Dr Wil iams, and the peculiar feature is that it is complicated wit degeneration, which does not usually occur in hypertrophi cirrhosis But in this instance the fatty degeneration is t be regarded—at least, so far as the microscopic appearanc goes—as an evidence of a conservative process At no poin could vacuoles be made out which resemble those seen i cases where the liver cells undergo metamorphosis In re gard to the other form of degeneration, the word amyloid i as applicable as any term that could be used The test fo amyloid material was not made in this case to my knowledg

DR JOSEPH M PATTON—These two very interesting an complete reports, together with the discussion so far, serv to illustrate the confusion that exists in regard to the path ology of the different forms of cirrhosis of the liver As D Edwards has stated, there is a marked difference of opinio entertained by the French and German school When w have gone over the various reports regarding this subjec we are so inextricably confused that it is difficult to mak out anything in regard to the present status of the questio It seems to me, that clinically and in a gross pathologi way, we can certainly make out that we have an atrophi form of cirrhosis of the liver, which clinically is not as rule accompanied with jaundice, but which may be so, an that we have an hypertrophic form or an enlarged live which is cirrhotic, which is more apt to be accompanied wit jaundice and in which cirrhotic processes are most likely t be found beginning in and around the biliary duct Clin cally, it is very difficult to make out, when you first see case which of those two forms it may be If a man does n believe in the hypertrophic stage of the ordinary atrophi liver, he would not be puzzled, but the consensus opinion is in favor of such a stage,and personally I am sat fied that I have seen two or three cases in this stage in whic the liver was enlarged and which afterward develope a typical hob nail liver This does not always occur, and is not an easy matter to make out this stage because tho cases comparatively seldom come under our observatio during the enlargement of the organ

DR R H BABCOCK—One point of clinical interest is thi we ordinarily suppose that an atrophic cirrhosis of t liver means a liver smaller than one of normal size W certainly do observe, clinically, cases of liver which, aft having been of abnormal size from passive congestio for years, undergo contraction and hardening witho coming down to a size less than a normal liver, and u less I am mistaken—and if I am in error I wish some of t pathologists present would correct me—such a liver is a instance of atrophic cirrhosis, although not Laennec's atr phic cirrhosis I have in mind two cases of mitral disea in both of whom the livers are larger than normal, exten ing some inches below the inferior edge of the ribs In the cases the livers are very firm, hard, and with a sharp gris inferior edge One of the patients has been under my o servation since September, 1886, and the liver when I fir saw the case was apparently simply one of passive conge tion The inferior edge presented a rather rounded bord and there was tenderness That liver has since contracte and all of the symptoms of which the patient complain during the state of congestion have passed away Her liv reaches nearly the level of the umbilicus Is not this a ca of atrophic cirrhosis of the liver in which the organ is larg than normal?

DR EDWARDS—The reason that I brought out the confli ing opinions of the different authorities on the subject w to show how one, in searching for definite criteria to d ferentiate between the two cirrhoses would be unsatisfi because there is scarcely a single criterion given for o type that may not be found in the other The second poi and one that I would like to have heard discussed connection with the case reported, was the almost exact p allelism between the clinical questions which came up respect to our case and the pathologic findings, that is say, the difficulties which we encounter clinically are ins nificant to those which we find on gross pathologic inspe tion, or even under the microscope

DR WILLIAMS—It seems to me as if the differential di nosis between many cases depends more upon clinical th microscopic evidences We may get cases of hypertrop cirrhosis with a considerable difference between them r croscopically, and I would rather agree with the obser tions made by some French writers, that the disease c be called hypertrophic cirrhosis with jaundice, if we ha an enlarged smooth liver and enlarged spleen with jaundice and without ascites, where carcinoma, echinococcus cysts, and other causes of enlargement of the liver can be excluded, irrespective of the distribution of the connective tissue or the presence of degeneration of the liver cells

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SERO-THERAPY AND ACCESSORY TREATMENTS OF TUBERCULOSIS

Read before a Tri State Medical Society, April 21, 1895, St Louis, Mo

BY PAUL PAQUIN, M D

PHYSICIAN IN CHIEF OF THE ST LOUIS SANITARIUM FOR THROAT AND LUNG DISEASES, ST LOUIS, MO

In January last I had the honor to report to the St Louis Medical Society, the result of my researches up to that time, on the action of a certain kind of serum in the treatment of tuberculosis The clinical history of twenty five cases treated six weeks or three months was given Seven cases (four with cavities, among whom two had been bed-ridden and given up as absolutely hopeless), were brought to the Medical Society at night, in a weather rendered severe by the fall of a melting snow, and not one coughed during the two hours of their exhibition in a smoky room It was then demonstrated that all of the twenty five patients had been decidedly benefited, the least that had been done for a few of them was the arrest of the decline Only four or five were benefited to this slight degree, while all the others, all in the last part of the second or in the third stage of pulmonary consumption, were improved to a marked degree in almost every respect Chief among the good results was the universal gain in weight, which ranged from one and a half pounds in two weeks in people who had been losing twice as much per week, to twenty three pounds in two months, this, in spite of the decidedly meager fare that is naturally granted in the City Hospital and Poor-house Since then, I may add that the improvement in the city cases has continued, notwithstanding the most severe tests and serious interferences, such as the repeated sulphur fumigations for several weeks during the smallpox epidemic (a test too hard even for healthy lungs), and such as the efforts that were made almost daily to produce a mental feeling against the treatment

Furthermore, I am glad to report good results obtained since then in three private cases Mrs R, Mrs V and Mr P, all in the second stage of the disease, whose symptoms have disappeared to such a degree that one is tempted to call them cured That report was a statement of facts indisputable, but the facts were not accounted for, nor did the profession at home, generally speaking, view them with absolute confidence On the contrary, although any physician could have verified the report by visits to, and study of the patients, some usually wise doctors concluded that the facts brought out must be considered impossible any way, whatever the evidence, and must therefore be discredited But the patients still live and are still improving, and again the verification of the report then made, and to day reaffirmed, is invited Any physician or other individual, whom the Superintendent of the City Hospital may welcome, may go and judge for himself

To day I have the honor to present to this scientific body a theory explaining to a limited degree the basis of the therapeutic action of the serum and, furthermore, the grounds for, and the kind of accessory treatment that should be practiced in tuberculosis

In the first place, we must realize that sero-therapy is not *medication in the usual acceptance of the word* It is not the production of pure chemic effects as by drugs, it is the production of certain *phenomena by the increase of quality or virtue of pre*-existing physiologic functions, and perhaps, the creation at times, of physiologic faculties unknown before in the diseased organism In other words, sero therapy, the use of nuclein and other organic extracts of the kind, whether animal or vegetable, produce good therapeutic results in certain conditions, probably because they augment or create natural defensive physiologic forces necessary to fight disease

And what does this *antipathologic* power depend on? It depends on the individual and collective energies and faculties of the cells, which form the *ultimate appreciable structure* of such complex organisms as man, and other multicellular beings

In infections, at least, we should no longer "dope" *man as a whole*, to cure him, but we should strive to interpret the nature of the cells forming his tissues, their activities, their reactions to drugs and physical treatment, and we should minister to these microscopic individuals or aggregations, with a view to increase their natural functions in the prevention of diseases, or create activities of this character

Sero-therapy in tuberculosis has produced the effects stated in my first report How did it do it? By what mode of action can the serum of the blood of a horse rendered, by *certain methods*, more strongly immune against tuberculosis than it is naturally, arrest the tuberculous process in an infected human being? It *is, in my judgment, on the* one hand by an infusion in man's system of a certain quantity of the protective or defensive substances secreted naturally by the cells of the horse and during the process of immunization, the property of which is to protect this animal against the disease, on the other hand, it is probably by the action of the nuclein of the serum, which stimulates the cells of a human body to greater physiologic action against the germs of tuberculosis It is, in a word, a form of germicidal nutrition of double value obtained by a physiologic process

Many objections have been raised against sero-therapy by those who prefer polypharmacy (which is so convenient and presupposes no great knowledge of physiology or pathology, or anything else to practice medicine) This was to be expected

It is a great trial for the retardative doctor in the scientific procession of medical men, this physiologic therapeusis It is a very inconvenient thing to find one's self in the presence of the awful necessity of studying man seriously through a microscope, and to know one's self incompetent to do it But this is the situation Prate as we may against scientific medicine, microscopy, bacteriology, we must acknowledge that only through such, and the application of scientific facts in practice, can medicine become a science exact enough to make the doctor know and trust medicaments in a given disease Clinical observations are invaluable as indications, and they often suffice to point to useful therapeusis, but observations alone explain nothing, and give us little data to rely upon with confidence and safety But I am digressing I will say that so far the objections mildly raised by the timid, wildly painted by the fearful, foolishly decried by the ignoramus, have not materialized Neither glanders, nor any other awful disease of the horse, in the three years of experimentation with serum, abroad or in this country, has been transmitted to man True, a death or two have been attributed to the serum in the treatment of diphtheria, but what if it is true? What valuable, active medical agent has not caused one death in five thousand treated, or per ten thousand doses?

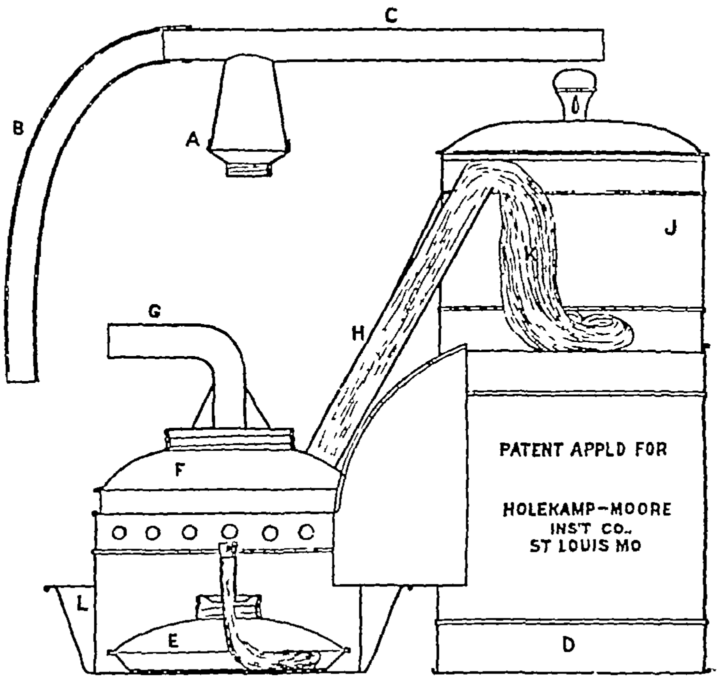
For my part, I can say that over three thousand injections of serum produced under my direction, have been made in human beings, and not a serious accident has resulted In six different injections there resulted a quick disturbance of the capillary circulation, evidenced by a flush of the face, dizziness and weakness These lasted but a few seconds, but in two instances were followed by rigors In a few cases in which the injections were begun with large doses, 1 or 2 drachms, and pushed energetically, there followed a mild urticaria, which promptly disappeared soon after the injections were dropped or reduced, and did not reappear during the progressive dosage which followed in nearly every case

These annoyances (produced chiefly during experimentation) are insignificant when we consider the hopelessness, the fatality of tuberculosis under any and all forms of treatment heretofore employed The risk of one fatal result per cent would be justifiable, if not indeed a larger proportion

But because sero therapy does produce a physiologic effect that tends to arrest tuberculosis, it does not follow that a physician should depend on that alone, in all forms and in any stage of consumption, and expect a cure For one thing, it is preposterous to expect a decomposed lung to be restored by any form of therapy It is not easier to reconstruct a pair of degenerated lungs than it would be to replace a gangrenous limb by any method Consequently, the disease must always be diagnosticated with scrupulous care, not only to establish the existence of the malady, but its particular nature, its extent, its relations to any and all of the various important organs of the body In women the relation of tuberculosis to ovarian and uterine affections, should always be carefully considered There are besides, the mixed infections to consider—we meet them daily The lungs, the intestine, the liver, become the seat of myriads of germs of different kinds sometimes, and tuberculosis is then a complicated disease deadlier and more rebellious than in the most virulent form uncomplicated What, then, should be the treatment of tuberculosis? Generally speaking, so far as the constitution goes, it should be cellular, and locally it should be antiseptic Taking as a type, pulmonary consumption, it is necessary on the one hand to try and force the cells of the diseased to produce the greatest amount of defensive energy in whatever form nature may exhibit it This may be accomplished presumably by sero-therapy, and may be assisted by nuclein, etc On the other hand, we must invariably insist on the constant use of reliable non-poisonous antiseptics This may be considered secondary to the main treatment, but in fact it is of the greatest importance It is directed to the specific and complicating germs themselves, and aims to arrest their development

The continual re-infection in tuberculosis, both by swallowing sputa and by the cumulative growth of the specific germs and various others, and the progressive alterations of tissue in the diseased parts can be somewhat checked by a proper direct medication, and thereby cellular constitutional remedies are given better opportunities to act

Among the oldest forms of lung medication, is the inhalation of medicated vapors or atomized drugs The method is good, but unfortunately it falls far short of the object sought, chiefly, because the inhalations are not constant enough for one thing, and, on the other hand, the antiseptics selected are seldom well chosen Inhalation, to produce useful, lasting, germicidal effects, must be almost continuous. During a long period of experiments, I have tried the various inhalers on the market, but none filled the want in my judgment What we need is an apparatus that will atomize or vaporize eight or twelve or more hours continuously, at a slight expense After numerous experiments and tests, the vaporizer here exhibited was produced It is not yet perfect, but needs only slight improvements to make it what is desired It will throw a spray all night and all day at the cost of a few cents of alcohol, and will keep the air of a room filled with antiseptic material.



Beside this, a mouth-piece attached to the nozzle can be made to direct the vapor straight to the nose and mouth from the bedside

Another thing useful for disinfection in tuberculosis, is this "lip-trough-inhaler"[1] for essential oils. It is fitted under the nose, and the ribbons are tied behind the head Before putting it on, a little bundle of absorbent cotton, or a little sponge is placed in the trough and a few minims of the essential oils selected are dropped on the cotton twice or three times in the twenty-four hours This may be worn almost constantly I devised this little instrument to carry out the idea of Carasso, who prescribed with great benefit, essence of peppermint on a little cotton wad placed under the nose

In conclusion, let me speak of two other very serious necessities in the treatment of consumption. I refer, first to nutrition, which may be forced and should always be guarded and wisely directed—of this I need not speak here I will only say that in cases of mal-nutrition in tuberculosis, some easily digested and very nutritious aliments must sometimes be used Mellin s Food has served me a very good purpose in many cases, I prescribe it often, and the various liquid peptonoids have materially assisted me

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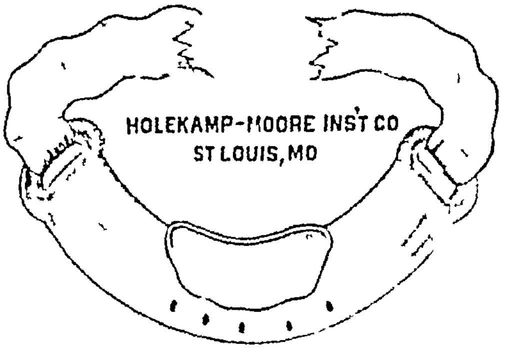
[1] Manufactured and owned by the firm of Holekamp Moore, instrument makers, St Louis, Mo



I refer secondly to repeated disinfections of the mouth The mouth and throat should be frequently gargled with a strong non-irritant antiseptic preparation This is demanded both for the protection of the patient against infection of the throat, which is not uncommon as a secondary process, and for the protection of relatives, friends and the public, because through kisses and the saliva expectorated, the germs are carried to others The writer has tried numerous ingredients for this purpose but was disappointed more or less, or dissatisfied in one way or another, with everything tried Citric acid, and most of the essential oils are good, but unfortunately they are not easily combined over the prescription counter In the last few months I have tested and used Pasteurine very largely, and found it just what seemed desirable Its antiseptic effects are strong, and yet there results no irritation The preparation is exceedingly pleasant to the taste and is very fragrant I use nothing else now

I here append a few formulas which I use for direct antiseptic medication in tuberculosis of the respiratory organs

℞	Creasote (beech-wood) or trikresol	4 oz.
	Pasteurine	8 oz
M		

Sig A large tablespoonful per pint of water Vaporize in the Continuous Siphon Vaporizer"

℞	Carbolic Acid	½ dram
	Pasteurine	8 oz
M		

Sig Use as a mouth wash and gargle three or four times a day

℞	Ess oil of peppermint (chem pure)	1½ oz
	Ess oil of eucalyptus (Tyndale's)	½ oz
	Ess oil of cinnamon (chem pure)	½ oz
M		

Sig Two to five drops on cotton or sponge in "*Lap-Trough*-Inhaler," three or four times a day

PROTECTOR FOR THE HAND IN INTUBATING THE LARYNX

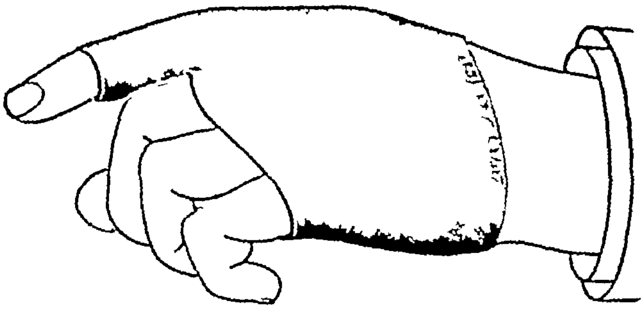
BY JOHN EDWIN RHODES, A M, M D

PROFESSOR OF PHYSICAL DIAGNOSIS AND CLINICAL MEDICINE NORTHWESTERN UNIVERSITY WOMAN S MEDICAL SCHOOL LECTURER ON LARYNGOLOGY AND DISEASES OF THE CHEST RUSH MEDICAL COLLEGE ETC CHICAGO

One of the great dangers attending the operation of intubation, is that of injury to the hand of the operator, while introducing or extracting the tube

I have employed a number of devices for the protection of the hand and finger Sometimes a heavy rubber cot, cut off at the closed end, and drawn well over the finger will answer the purpose with a very young child With older children, protection for the finger alone is not sufficient, and lately, I have wrapped a piece of adhesive plaster about 4 or 5 centimeters in width about the knuckle of the index finger, as suggested to me by Dr John Bartlett This does very well, but takes time, and is not always obtainable

The protection of the knuckle and hand are necessary because the larynx is sometimes so far from the lips that, in order to carry the tip of the finger into it, the knuckle is pressed against the upper teeth so forcibly that a contusion or laceration of the skin may be caused, unless great care is exercised In the hurry incident to this operation, which requires dexterity and often great celerity, some precautions are apt to be neglected, and the dangers resulting from a wound which might be received in this way are forgotten



I have devised the protector, believing that it meets all the requirements for which it is designed, in the operation It can be carried in the intubation case, is easily and quickly adjusted, it can be easily cleansed and disinfected, is flexible and does not hamper the movements of the hand or finger It affords perfect protection to the forefinger and the plantar and palmar surfaces of the hand, so that injury by the teeth of the patient either from biting or from the chance slipping of the gag, (an accident which often occurs), or from forcible pressure against the upper teeth in reaching the larynx is impossible

Messrs Sharp & Smith, 73 Randolph Street, Chicago, have made these protectors for me in two sizes, so that the hand of any operator may be fitted They are made of the best rubber, 1½ millimeters in thickness

Venetian Building, Chicago

SOCIETY PROCEEDINGS

Association of American Physicians

Tenth Annual Meeting held at the Army Medical Museum and Library in Washington, D C, May 30 and 31, 1895

[Special correspondence of the JOURNAL]

FIRST DAY, THURSDAY, MAY 30

The meeting was called to order by DR WILLIAM OSLER, who delivered the President's Address, in which he asked how far the Association had fulfilled the object which it had in view at its beginning, and if the aspirations and hopes had been realized in the advancement of scientific medicine This was an organization with no code of ethics, no medical politics no one cared who were the officers and who not It was not asked from what part of the country a member came, but has he done good work, and still more, if he has anything worth saying and can he say it? Nine volumes of transactions show what has been done Some of the most noteworthy papers of the past ten years have been brought to light before this Association and all the questions of the day have been discussed The classical work of Fitz and Draper has been brought before the Association and in the discussions such subjects as the diagnosis of diseases of the stomach, of the pancreas, dysentery, infarction and other affections of the bowels, heart disease, sclerosis of the arteries, the mutual relation of renal, arterial and cardiac changes, anemia and chlorosis, thrombosis in chlorosis, myxedema treated with thyroid extract, removal of the ovaries and tubes, subphrenic abscess, acromegaly and lead poisoning had all been discussed Dr Osler said "Our Association has had already a potent influence on the study of pathology and clinical medicine in this country We need, however, a larger growth of men who are devoting themselves exclusively to these branches The rapid progress of the medical schools has increased the number of teaching positions in the scientific branches and there is at present an actual scarcity of well trained pathologists and bacteriologists to fill them There is no need to insist upon the necessity of accurate and careful training in the development of workers in these branches I do not think the profession of this country understands as yet the art of training special clinical physicians They have taken too much for granted that such men develop readily in the routine of family practice True, along this path some of the most noted men of our ranks have traveled, but the time has come when able young men should be encouraged to devote themselves to internal medicine as a specialty, content to labor and wait during the first ten or fifteen years of professional life with pathology as the solid basis of development Such men will pass to the wards, through the laboratories, thoroughly equipped to study the many problems of clinical medicine, they will gain the confidence of their professional brethren by their accuracy and skill, and through them they will reach the public and a large practice Such an opportunity and career is within the reach of every physician in any city with a hospital of fifty beds "

Dr Osler then referred to the members who had died, and mentioned especially Drs Alfred L Loomis, of New York, and William C Dabney, of the University of Virginia

DR B K RACHFORD, of Cincinnati, then read a paper on

LEUCOMAINE POISONING,

in which he said that leucomaine poisoning showed itself 1, as a true migraine of leucomaine headache, 2, as a migrainous epilepsy or leucomaine epilepsy, and 3, as a migrainous neurosis or leucomaine gastric neurosis We know very little about these substances The principle ones are xanthin and paraxanthin and they were described by Salomon, of Berlin, who has done the best work on this, and he laid down the following points

1 Paraxanthin and xanthin are poisonous leucomaines of the intestinal acid group, capable of producing the most pronounced nervous symptoms They are readily soluble in water, urine and blood

2 Paraxanthin is present in normal urine in such small quantities that its poisonous properties are lost in the solution

3 Paraxanthin and xanthin are not found in the kidney, they are excreted from the blood by the kidneys

In normal urine it takes about 9 liters to prove the presence of paraxanthin, and when we find it in 4 liters it is abnormal Migrain is the most common manifestation of xanthin poisoning In one case he found it in 3 liters of urine and in another case in 2 liters It is recognized by the needle crystals and by its physiologic effects on animals It could not be found between the attacks, which shows that it is excreted in disease during the attacks but not between them In migrainous epilepsy the characteristic symptoms are 1, the sudden onset of the attack, as a rule without warning, 2, the muscles are rigid but not convulsed, 3, labored, gasping and irregular breathing, 4, unconsciousness from the beginning to the end of the attack, and 5, the heart's action is rapid but regular and strong In the study of migrainous epilepsy the following summary of facts may be made

1 Uric acid and its compounds are not poisonous

2 Paraxanthin and xanthin are poisonous leucomaines of the uric acid group which when injected into the mouse produce the following symptoms (*a*), nervousness, extreme reflex excitability, almost tetanus and at times convulsive movements, (*b*), clonic tetanic stiffening of all the muscles followed by muscular relaxation, (*c*), dyspnea, orthopnea, asphyxia, gasping and difficult respiration is perhaps the most characteristic symptom, (*d*), stimulation of the heart, its movement marked and strong

3 The patient during the intervals between the attacks did not excrete sufficient paraxanthin to be detected in 4 liters of urine

4 The patient during an attack excreted a quantity of paraxanthin and xanthin enormously in excess of the normal amount The paraxanthin thus excreted obtained from 3 liters of urine produced in the mouse and rat the characteristic symptoms of paraxanthin poisoning and abdominal enlargement

5 The attacks during and after which the patient excreted such large quantities of paraxanthin were very similar to the paraxanthin poisoning in the mouse

6 The paraxanthin excreted in such large quantities just following this attack must have been in solution in the blood during the epilepsy In his experiments on animals he found that the permanganate of potash acted as an antidote to the leucomaine poisoning and for this reason he gave it to his patient with epilepsy, with some good to her, and she still takes it and has not been able to do without it for longer than six weeks at a time He also reported one case of migrainous gastric neurosis in which there was vomiting relieved only by morphia, increased quantity of uric acid, xanthin and paraxanthin in the urine He made the following points

1 He found a history of migraine

2 Previous personal history of sick headache

3 The patient now suffers from attacks of severe gastric neurosis which recur at intervals of two or three weeks

4 In 4 liters of urine excreted by the patient, in the interval between the attacks no paraxanthin was found and the "final fluid" was not poisonous to mice

5 In 2 liters of urine passed by the patient during an attack, both paraxanthin and xanthin were present in comparatively large quantities and the "final fluid" was especially poisonous to mice

6 From about one pint of stomach contents vomited by this patient during an attack, xanthin was separated but no paraxanthin was found We can thus recognize three clinical types of leucomaine poisoning (*a*), leucomaine headache, (*b*), leucomaine epilepsy, and (*c*), leucomaine gastric neurosis

DR F P KINNICUTT, of New York, asked if he had examined the urine of tetanus patients It is probable that a certain number of these cases of tetanus are due to this In cases of disordered stomach, especially gastro-intestinal disturbances, an examination might throw some light He has seen two cases of tetanus, one fatal in forty-eight hours, in which the autopsy showed an enormously dilated stomach The patient had had several previous attacks

DR W H THOMSON, of New York, was much gratified at this paper He has long held this view Cases of functional neurosis are not nervous disease at all, but are due to toxins rather than to gastric disease He had had success with the benzoates of sodium and ammonium Some of these cases occur in groups and develop these nervous symptoms only now and then Heredity plays an important part here

DR F C SHATTUCK, of Boston, asked how long it took to make these chemic examinations of the urine He asked because he once had such a case and it took four weeks

DR J E GRAHAM, of Toronto, asked if he had made examinations of the urine shortly before an attack

DR RACHFORD said that in his cases he took usually about three weeks to make an examination, and he has made these examinations at almost all times, and one week before an attack he had failed to find them He had thought of tetanus but had not had a suitable case since he began this work The subject has an important bearing on uremia and allied conditions

DR A C ABBOTT of Philadelphia, then read a paper on the "Effects of the Gaseous Products of Decomposition upon the Health and Resistance to Infection of Certain Animals that are forced to respire them " He put animals under a bell jar and compelled them to breathe air from decomposing substances and even inoculated some of them with the typhoid bacillus culture and found that the general results were negative, the animals did as well as others not experimented on, and he thought that such air has not the power of inducing pathologic conditions, or if it has, it has not been shown

DR C BAUMGARTEN of St Louis, then read a paper' Renal Affections following Influenza " The question is of great interest The origin of many cases of nephritis is very obscure, but the study has narrowed down this subject and simplified it Influenza is one cause not generally recognized Many authorities are silent on this subject and little mention is made of it in medical literature It occurs more frequently than is supposed Damage to the kidney is a frequent, certainly serious result of the grip Besides transient albuminuria, there have been found acute degeneration of the kidney acute inflammation, both forms of chronic diffuse nephritis and cases of persistent albuminuria not plainly belonging to one of these groups The damage to the kidney does not usually show itself until the influenza is forgotten This has been shown in life insurance examination statistics In the five years preceding the grip, he had found but about 1 per cent of albuminuria among the cases he examined but in the next five years after he found 3½ per cent

Dr A Jacobi of New York, had found this sequel frequently The diagnosis was made possible by the use of the centrifuge and many cases would have escaped notice but for this instrument It is the same kind of albuminuria as after diphtheria and typhoid fever and it must also be caused by a toxin of the germs causing those diseases It is not like the post scarlatinal nephritis The large majority of cases get well in two or three weeks or a month but a few become chronic

Dr James Tyson of Philadelphia, had seen several such cases, and he found that persons who had a physiologic albuminuria were always worse after grip

Dr F C Shattuck of Boston had seen a number of these cases In one autopsy he had found a large red swollen kidney He did not believe the condition was the same after each disease He does not recall a case following typhoid fever as that after other diseases

Dr M H Fussell of Philadelphia, has discovered so many of these cases that he never regretted his rule to make a routine examination of the urine in all cases without exception

Dr Jacobi said he had referred to the kidney complication during and not after typhoid fever

Dr A H Smith of New York, said that this complication was much more frequent than was usually supposed, and those we recognized probably represented a small part of what actually occurred Subnormal temperature is one symptom due to profound poisoning of the nervous system, it is much more severe than the primary poisoning from the grip

Dr Baumgarten said in conclusion that we must distinguish between those complications of the kidney that came on during and those that came on after the grip, those with or without dropsy, those with uremic symptoms and other troubles which can probably be traced to this devastating disease

Dr. George M Sternberg, Surgeon-General, U S A, then presented a paper prepared by himself and Dr Walter Reed, Surgeon, U S A, on "Immunity against Vaccination Conferred upon the Monkey by the Use of the Serum of the Vaccinated Calf and Monkey" They succeeded in establishing immunity in the American monkey for thirty days, but the result did not reach a practical conclusion because the amount of serum to neutralize the poison of the disease was too large for a dose, being about 1 to 100 to 1 to 50 per body weight

Dr James T Whittaker of Cincinnati, then read a paper on the "Etiology of Idiopathic Hypertrophy of the Heart" He did not refer to enlargement due to valvular disease The term idiopathic, is a misnomer In some cases the cause remains concealed and it is called cryptogenetic It is not a rare disease and may occur after severe strain as after war There is a change in the position of the apex The diagnosis may be made without the aid of percussion The attempt to make out the triangle of the heart dullness by percussion is difficult Hypertrophies are due to 1, increased resistance in the vascular system, as in arterio sclerosis, 2, to diseases of the heart muscle from infection, degeneration, etc, 3, affections of the nervous system The valvular disease usually has a previous cause There may be a hypertrophy from natural causes There may be a development of the heart walls with backward development of the thorax as pointed out by Germain Sée There may be the hypertrophy of age, of work of plethora of pregnancy and of alcohol In pregnancy there is increased work thrown on the heart due to an increased size of the uterus and mammæ In Munich, heart atrophy from alcohol is put down as third in the causes of death in that city Syphilis of itself, rarely affects the heart but the resulting arterio sclerosis does Bright's disease, as is well known, causes heart enlargement Lead poisoning is another cause Saturnism is more frequent than is usually supposed Most cases succumb to heart failure and the real cause is not found out Then other causes are diseases and deformities of the chest, emphysema, kyphosis, myocarditis, gout diabetes, irritation of the vagus, use of tobacco and excess of venery, mental troubles, success or failure in business Look for the cause and treat it Women are rarely affected in this way

Dr J P Crozer Griffith of Philadelphia, read a paper entitled "The Transmission of the Mitral Diastolic Murmur," the object of which was to call attention to the fact that these murmurs are often heard outside of the area usually given He had seen several cases in which this murmur was heard up toward the axilla and even in the back

Dr James Tyson of Philadelphia, had seen one of the cases mentioned and had observed this fact in other patients

Dr James T Whittaker of Cincinnati, said it was not so much to determine the position and extent of the murmur but to find the point of greatest intensity The intensity of the murmur is indicative of the gravity of the disease

Dr Charles Cary of Buffalo, spoke of the causes of these sounds and from the anatomic relations he thought that a regurgitation must often accompany these presystolic murmurs

Dr John H Musser of Philadelphia, had been familiar with the work of Dr Griffith and he related a case of his own In referring to Dr Whittaker's paper he had had mitral hypertrophy of the heart in which a mitral regurgitation relieved the headache, high tension and other unpleasant symptoms

Dr McPhedran of Montreal, thought that in these cases the loudness of the murmur depended on the tension of blood in the pulmonary circulation

Dr A H Smith of New York, said that a murmur that was diastolic may also in part be systolic when the mitral curtains were stiffened and did not coapt There is a regurgitation which ceases when the pressure behind the valves reaches a certain point It may be that even in health there is a little regurgitation

Dr Charles G Stockton asked if it was a diastolic or presystolic sound

Dr Griffith said in conclusion that the position of intensity is the position of mitral stenosis with no murmur over the aortic area and none over the sternum As to the varieties and cause of the loudness he did not know or whether an explanation had been given Many things can not be explained as to the loudness of the murmurs These murmurs were all pure murmurs There is no difficulty in finding the diastole and systole

Dr A H Smith of New York, then read a paper on "The Use of the Differential Stethoscope in the Study of Cardiac Murmurs" With good hearing the differential stethoscope was very important in distinguishing between synchronous and alternate heart sounds in different parts of the chest

Dr Whittaker said this was very well when the hearing was equally good in both ears which was so often not the case, but he thought the question of the position of the murmurs was not as important as the condition of the heart muscle

Dr Charles Cary of Buffalo, read a paper on "The Cause of the Exaggeration of Sounds over the Right Upper Chest, both in Health and Disease," in which he demonstrated some specimens to show that there was an anatomic reason for this difference and showed the points of resemblance and difference between the two sides of the chest Drs Cary, Griffith and Tyson discussed this paper

Dr Charles G Stockton of Buffalo, reported "Two Cases of Fat Necrosis"

Second Day, Friday, May 31

Dr William H Welch opened the discussion on antitoxin The decision of the good of antitoxin is in the hands of the clinicians and not of the bacteriologists One observer says the question does not rest experimentally on a scientific basis It is to be conceded that the Klebs Löffler bacillus is the cause of diphtheria These arguments would also hold against other diseases The results of experiments are the most striking, but we have more in the application of the tetanus antitoxin The introduction of its application to human beings is so that one can not argue from animals to human beings The tetanus antitoxin is not efficacious because the poison or toxin of tetanus is cumulative and the antitoxin has no effect because it is too late We do not know how the antitoxin acts, but that is no argument against its therapeutic action This is also true of other diseases and this should not prevent us from using it There are two prominent theories, the chemic and the vital theory The antitoxin quite neutralizes the toxin according to the chemic theory, but the vital theory argues that the antitoxin acts through the changes of the serum on the cells to make them immune The vital theory seems to satisfy some demands This method of treatment does not prevent post-diphtheritic paralysis This complication is as common if not as severe after as before the treatment These paralyses depend upon the strength of the toxin This is against the chemic and for the vital theory There seems to be a quantitative relation between the toxin and the antitoxin, but there are no means of knowing how much toxin is in the blood and how much antitoxin to give and we may give too little It is not known whether it exerts a direct specific action on the membrane or not The benefits of the treatment are very doubtful when the antitoxin is introduced after the third day Behring showed this in experiments on animals We are not to expect brilliant results until we decide on what cases are diphtheria and what are not As the organism is found in healthy throats this would include cases that were not recognized before and many cases which were not distinguished before, clinically, are now called diphtheria On the other hand, there are certain cases of pseudo membranous inflammation which are like diphtheria but which are not due to the Klebs-Löffler bacillus If all these cases are taken into account the statistics of this disease will be markedly affected As regards the proportion of cases like diphtheria but which are not, statistics differ, but my impression is that the very large amount of statistics from boards of health and hospitals give a wrong idea on this subject It is not easy to find the bacillus and these examinations are usually made in a routine way, hurriedly, by inexperienced men and when we consider the difficulty of finding the organism we may say that in 30 to 40 per cent, it is not diphtheria and it is probable that not more than 5 or 10 per cent of the cases are discovered Then there are many complications of other organisms present which increase the difficulty The mechanical obstructions in the larynx are to be taken into consideration As to the direct effects of the antitoxin they are not different from those that may occur in the natural cure of the disease Indeed the treatment is a natural cure, it is only a hastening of the natural cure The statistical results are at the present time very elaborate, and from all sides and in all countries the figures would prove that this treatment is of great benefit

From these statistics, various inferences may be drawn They may include a large number of light cases and some mild cases may be called diphtheria when they are not The agitation in the public press causes persons to seek treatment earlier than usual Some say that of late the epidemics of diphtheria have been milder than formerly and cases would have recovered under any form of treatment In some cases the antitoxin has no effect at all, possibly because the cells of the body fail to respond to the action of the serum Then the general impressions of such men as Baginsky, Widerhofer and others obtained at the bedside are of value, and they are inclined toward believing in antitoxin Kassowitz of Vienna, believes that this treatment has done much harm and says he has found at many autopsies evidences of the damage done to the body by this serum Antitoxin is said to have no effect on the post diphtheritic paralyses and to cause more albuminuria, but it has certainly caused a more careful examination of the urine to be made in these cases It is made out that albuminuria is found in from 83 to 76 per cent of all cases treated All arguments on the injurious effects of the serum should be based on whether it is given subcutaneously or intravenously Skin eruptions and affections, chills, pustules, etc, are occasional injurious effects of the serum, but they are not permanent and they do not outweigh the benefits There is certainly a reduction of the mortality from one-third to one half, if the case is treated before the third day The injurious effects of the remedy in some cases are certainly great, but the benefits far outweigh the harm done and the bad effects are usually only temporary It will be a long time before final judgment can be given on this remedy

Dr Mason of Boston, reported a large number of cases treated at the Boston City Hospital, and the mortality and morbidity had certainly decreased There may be some sources of fallacy, for instance there are more school inspectors and each child is carefully examined, and if the bacillus is found in its throat it is kept at home and the case is put down as one of diphtheria The general appearance of a diphtheria ward now is different and the nurses and attendants are not afraid of such cases as formerly Immunization is short, however Some cases develop in spite of the injection The effect of this treatment is more marked after the membrane is lost In hospital there are few light cases, as they are rarely seen before the third day

Dr A Jacobi of New York, is favorably inclined to this mode of treatment, but the numbers as yet treated are far too small from which to draw conclusions We do not want hundreds but thousands of cases There have been seasons when the ordinary treatment with the bichlorid has been just as successful as the antitoxin is at present He knew of forty cases collected some years ago and thirty-nine got well with the old treatment Some persons refused the antitoxin treatment and preferred the old methods When he used antitoxin he used other things too It may not have been a scientific way but he wished to save his patient Albuminuria is a very common symptom in any case, but he thinks he has had fewer cases since he has used antitoxin than before He thinks the nephrites are less well marked He related the effects of the treatment in his experience on the membrane, and spoke of the operations of intubation and tracheotomy and their frequency since antitoxin was introduced He wished to place himself on record as a heretic He thought the clinicians were too much in the hands of the bacteriologists Diphtheria was not always caused by the Klebs Loffler bacillus alone, the other organisms were also found in the membrane and he thought the clinicians accepted too blindly the statements of the bacteriologists

Dr John S Billings thought that statistics to be of any value should be carried over a long period of time, and that in this question the value of hygienic principles should not be forgotten

Dr Mason said the only fair way to compare was by seasons

Dr A C Abbott of Philadelphia, wished to answer Dr Jacobi He thought the clinicians looked to the bacteriologists with good purpose, and the etiology of disease was in a very chaotic and tangled state until the bacteriologists lent a helping hand

Dr George M Sternberg said that the failure of tuberculin had brought such treatment into opprobrium and many were skeptical because the experiments with tuberculin on animals had not been successful

Dr F H Williams of Boston, showed a syringe that could be sterilized by boiling It was made of glass with asbestos packing and to prevent the needle from breaking off, in the case of restless children, he put in a small piece of rubber tubing between the syringe and the needle

Dr William Osler reported a number of cases treated with antitoxin and four of them showed no Klebs-Loffler bacillus

Dr D W Prentiss of Washington, then exhibited a patient, whom he had shown six years before with purpura hemorrhagica rheumatica The boy had almost lost his sight but still worked He had had good results with him by the use of phosphorus internally

Dr William Osler said that Henoch had described this disease very thoroughly 1, there are recurrences, 2, there are marked gastro-intestinal crises which may occur without any other manifestations, 3, the symptoms may be articular, 4, there may be hemorrhages under the skin, erythema multiforme, simple edema, hemorrhages from all the mucous surfaces and with all this an acute nephritis in many cases There is little literature on the subject in English and the best work is Henoch's Festschrift Drs Stockton and Prentiss also discussed this paper

Dr J G Adami of Montreal, then reported a "Case of Madura Foot" (Mycetoma Pedis) which was probably the first case reported in this country The microscopic appearance of the lesions reminds one of actinomycosis

Dr W P Northrup of New York, read a paper on "Gonorrheal Arthritis," in which he reported several cases showing the joint affected, the swelling, exquisite sensitiveness, little fever, short course of four weeks, and recovery with perfect joint and the effusion was only serous

Dr William H Welch of Baltimore, said that there was often absence of pus in the joints, and Dr Halsted had found hemorrhagic effusion in many joints which he had examined Dr Flexner had accidentally found that an extract of fetuses of pigs made an excellent culture medium for the gonococcus He also showed a specimen of gonorrheal endocarditis and from the patient Dr Flexner had extracted some blood, mixed it with agar and obtained a culture of the gonococcus

Dr F C Shattuck of Boston, was surprised to find on looking up the literature how often two or more joints were affected This paper was further discussed by Drs Cary of Buffalo, Mason of Boston, Griffith of Philadelphia, Adami of Montreal, Roosevelt of New York, Osler of Baltimore and Northrup of New York

Dr A Jacobi of New York, reported a "Case of Hyperthermy up to 65 Degrees C (148 Degrees F)" The man had fallen on deck and received an injury The temperature broke several special thermometers He ran away from hospital finally

Dr. William H Welch referred to a case reported by Dr Galbraith of Omaha, where the temperature went up to 171 degrees F

Dr I Guiteras of Philadelphia, made some observations on the 'Spleen and Marrow in Leukemia"

Dr F H Williams of Boston, exhibited a "Comfortable Way of using Cold in Fevers"

Dr George Dock of Ann Arbor, read a paper on "Goitre in Michigan"

Dr J L Graham read a paper entitled "Displacements of the Liver"

Dr. M H Fussell of Philadelphia, read a paper on "Carcinoma of the Liver with Cirrhosis"

Dr S C Busey of Washington, D C, in collaboration with Dr George M Kober read a paper entitled "Milk as a Morbific and Infective Agent," with Tables of 134 Epidemics of Typhoid Fever 73 of Scarlet Fever and 27 of Diphtheria due to Milk Infection

Dr W P Northrup of New York, exhibited the Fell O'Dwyer Apparatus for Forcible Artificial Respiration

Dr S J Meltzer of New York, read a paper on the Direct Faradization of the Stomach and the Intestines in nimals, as Cats, Dogs and Rabbits"

Illinois State Medical Society

Abstract of the Proceedings of the Forty-fifth Annual Meeting held at Springfield, May 21, 22, 23, 1895

[Special correspondence of the Journal]

(Concluded from page 896)

Dr H McKennan, of Paris, read a paper entitled

REPORT OF A CASE OF FOREIGN BODY OF THE TONGUE

The author said it was for the purpose of showing the exeme tolerance to retain foreign bodies, of an organ much in use, that he presented a report of the following case which ccurred in the practice of a neighboring physician and hrough whose courtesy he was permitted to present the acts as stated below

Otto G, aged 14, Jan 18, 1895, while shooting an old rusty hotgun, burst the barrel and produced the following injuies, which were described by his physician, who saw him everal hours after the accident as follows Face considerably burned by the powder, cut through the left side of he lower lip, about three-quarters of an inch in length, hree of the upper teeth and a large piece of the inner surace of the alveolar process were gone, a smooth clean ooking wound of the tongue about the *size* of a silver 10 cent piece was found a little to the left of the apex, with no evidences of a foreign substance present The whole organ was swollen, and the boy was unable to talk The parents opposed the use of an anesthetic The doctor cleansed and dressed the wound as perfectly as the nervous condition of the patient would *permit* On the following day the salivary glands were stimulated to great activity, and a profuse flow of saliva continued through the day Patient could not articulate sufficiently to be understood, and was totally unable to swallow He was fed by means of a stomach tube, and on the third day was able to swallow liquids sparingly The patient improved gradually and in the course of a few days all the wounds were healed, and at the end of a month he returned to his home in the country, where he was able to attend to his usual farm duties He claims to have suffered no pain or inconvenience except that his tongue seemed heavier than it had ever been before He was able to talk as well as usual One day, while at work on the farm, he noticed the click of a metal substance against his teeth He immediately presented himself to his physician, who was greatly surprised to find protruding from the former wound of the tongue, the screw end of the breechpin of the old shotgun This foreign body remained imbedded in the tongue fifty four days and measured one and a half inches in length, three quarters of an inch in breadth, one-half inch in thickness and weighed three-quarters of an ounce Owing to the protected position of the tongue in the body, injuries to this organ from external violence are comparatively rare When injuries do occur they are usually in the nature of shotgun or penetrating wounds

In Dennis' 'System of Surgery," vol I, Professor Conner, speaking of wounds of the tongue, on page 488, says "In passing through the mouth a bullet often wounds the tongue, either grooving it or tunneling it In rare instances the ball lodges, and cases are on record in which it has remained in place for years"

Dr McKennan regarded this case as unique, and believes it is without a parallel on record

Dr Arthur D Bevan, of Chicago, read a paper on 'Mastoid Disease and Resulting Venous Thrombosis and Brain Abscess"

Dr A C Corr, of Carlinville, followed with a paper entitled

TRACHOMA OF THE CONJUNCTIVA, FOLLICULOSIS OF THE CONJUNCTIVA, GRANULATED LIDS, NOT A DISEASE OF ITSELF AND OF ITS OWN KIND

The author quoted various authorities on diseases of the eye, pointing out what is in the main regarded as the cause origin and nature of this disease, and said that for some years he had spent much time in looking for an assemblage of symptoms that would enable him to readily recognize this disease and at this date he is forced to the conclusion that entitles this paper Within the past few months there has come to his hands what seems to him an indisputable demonstration that folliculosis and trachoma of the conjunctiva is a condition arising out of, and because of continued irritation or inflammation of the conjunctiva of various kinds, and *not itself* depending on a microbe or specific infection Dr Corr then referred to a paper read before the Wisconsin State Medical Society, June 6, 1894 by Dr J A Wurdemann, of Milwaukee and published in the *Ophthalmic Record*, October, 1894, entitled 'Pathology of Granular Conjunctivitis"

Dr Corr said that the author of this paper had elucidated the subject more perfectly than it would be possible for him to do, and that therefore he would content himself with quoting the salient points, which he did

Dr J Homer Coulter, of Chicago, contributed a paper entitled

WHEN AND HOW TO OPERATE IN ANTRAL EMPYEMA

The author said that this was one of the most mooted questions in rhinology to-day It was not in the hope of having it thoroughly settled that he ventured to call the attention of the society, *made up largely of* general practitioners, to the subject, but rather that by a brief survey of the opinions of specialists and the reasonable deductions therefrom, he might be able to assist the practitioners in the earlier and more certain diagnosis of the condition Many of these cases go a long time unrecognized and thus become proportionally serious conditions Reference was then made to the etiology of the disease, as well as to the symptomatology

The objects to be obtained by any surgical procedure were to form an exit for the pus, to destroy the pyogenic membrane, to establish as nearly as possible a normal functional activity of the cavity, and the surrounding mucous membrane Dr Coulter maintains that an operation should be done in the majority of these cases, considering 1, the ease with which the operation can be done, 2, the good results to be expected from the operation when properly and thoroughly done, 3, that bad effects or misfortunes are unusually rare considering the severity and extent of the operation, 4, that, as elsewhere, the earlier the operation the better, when at least a reasonably certain diagnosis of empyema has been made, 5, an exploratory puncture in case of doubt is both harmless and confirmatory, hence advisable, 6, no one operation will suit best for every case

As to the question of *how* to operate, the operation must necessarily be done 1, in the canine fossa, 2, through the alveolus, 3, in the middle meatus, 4, in the inferior meatus, or 5, the Talbot Fletcher operation Various procedures were then described The author favors the method of operating through the inferior meatus

The operation which he terms the Talbot-Fletcher method is a thoroughly practical one, a minute description of which may be found in the Journal for Nov 24, 1894 It consists in boring a hole through the anterior wall of the antrum at the base of the malar process, midway between the root of the second bicuspid and the first molar tooth, directing the drill upward and backward, the antral wall being easily pierced

Dr Oscar J Price, of Chicago, read a paper on

INFECTED WOUNDS

The most common habitat for pyogenic organisms with which we have to contend, in the management of infected wounds, is found upon the skin in close relation to the wound, especially if the parts are naturally moist, and also from the fingers of the surgeon or his assistants, infected instruments which have not been properly sterilized, dust which may be charged with dry and floating germs, ordinary poultices and common water dressings, unclean towels and tables, contact with ordinary clothing, dirt, grease and uncleanliness generally, exposed gauze and drainage employed which through inattention has lost all germicidal properties, and is thus frequently the nidus of auto-infections These are the more common means not only of producing infected wounds, but often of re-infection after the original invasion has been controlled But in the time allotted, the author said it was not possible to pursue the etiology of infection further than to outline some of its general principles The author then proceeded to a consideration of the pathologic phenomena presented in the development and progress of infected wounds, detailing the symptoms of this class of wounds

The treatment will depend in a great measure upon the location and condition of the part In penetrating wounds of the abdomen involving the peritoneum, it is good surgery in most cases to enlarge the opening sufficiently to inspect the injured parts, to surgically correct damaged conditions so far as possible, to gently sponge away all recognizable elements of infection, but to avoid all irrigations with any strong antiseptic solutions, as being likely to spread and disseminate the elements of infection existing The object is to cleanse locally and to secure the most satisfactory and thorough drainage commensurate with the amount of damage done The management of penetrating wounds of the thoracic cavity must depend to a great extent upon the evidences of infection presented If there be a protrusion of the lung in an infected condition, or if portions of clothing or other foreign matter have been carried in, we are undoubtedly justified in enlarging the opening that such foreign matter may be removed, and the surrounding parts carefully cleansed and as thoroughly disinfected as possible, and providing, here as elsewhere, thorough drainage for the suppuration which is so likely to occur by the introduction of drainage tubes covered by a piece of protective, forming a valve to the opening, to prevent the ingress of fresh air If the cavity is considerable, there should be a counter opening made at the most dependent or lowest portion, in which is also placed a similar drainage tube The author does not wish it to be understood that this mode of procedure should apply to all cases of penetrating wounds of the thoracic cavity Bullet and incised wounds were then dwelt upon, as well as the treatment of compound fractures attended with much laceration and evidences of infection

Dr E Wyllys Andrews, of Chicago, followed with a paper entitled

THE LAP-JOINT, OR IMBRICATION METHOD FOR THE RADICAL CURE OF HERNIA

At the outset, the author stated that this interlocking or overlapping principle is not limited to one application, but may be applied to other wounds of the abdominal wall in certain cases which he would not discuss at this time As applied to curing hernia, it is not intended so much to supplant as to reinforce existing methods, one or two of which are a great advance over those of a few years past, and which Dr Andrews briefly considered

For descriptive purposes, he classed all radical cure operations upon inguinal hernia as of two distinct types, namely, the *first* or *early type*, and the *second* or *modern type* These types were then dwelt upon at considerable length

The author summarized his remarks with the following conclusions

A successful method must be a true plastic operation upon the musculo-aponeurotic walls, especially the posterior wall and internal ring Adhesive peritonitis in the sac walls and cicatricial tissue in the canal are of no permanent value in radical cure

The advantages of imbrication are

1 Large strong flap to repair posterior wall
2 Triplicate layers of aponeuroses increasing strength
3 Broad surfaces instead of free edges, securing better union
4 Shortening of anterior wall gives support to the deeper sutures
5 Cord is amply protected

Dr Edmund Andrews, of Chicago, read a paper on

SOME OF THE EVILS CAUSED BY WHITEHEAD'S OPERATION FOR PILES, AND BY ITS MODIFICATION, THE SO-CALLED "AMERICAN OPERATION"

Whitehead's operation for piles has been in use about ten years It was devised by Mr Whitehead, of Manchester, Eng, and consists in dissecting out the whole lower inch of the mucous membrane of the rectum, and with it all the piles and hemorrhoidal vessels, and most of the submucous connective tissue, leaving the internal sphincter muscle pretty nearly stripped naked The first incision is a circular one, following the junction of the mucous membrane with the skin, called Hilton's white line, and dissecting up between the veins and the sphincter Dr Andrews then exhibited a cut representing the operation at this stage

He said that certain persons calling themselves "orificial" surgeons, had slightly modified the order of procedure by pulling down the mucous membrane and making the upper circular incision first, and the lower last They had given the procedure with this trivial alteration the pompous title of the "American operation" A surgeon in Berlin made the same change, but he did not call it the German operation The principle is the same, namely, the complete removal of the mucous membrane, veins, and most of the connective tissue from the pile-bearing inch of the bowel, the motive being to prevent the possibility of any more piles on that area

Those who favor Whitehead's method say that it should be used wherever the whole circumference is occupied by the dilated veins Some eminent authors seem totally ignorant that a cure can be accomplished with ease and certainty by either the ligature or by the clamp and cautery in all those cases It is never necessary to directly include all the dilated veins in the operation If about half the height of each pile is destroyed, the intervening varicosities shrink away and disappear

Dr Andrews had corresponded with some of the most eminent surgeons both in Europe and in this country regarding Whitehead's operation, and after his rather extensive investigations in this regard, he is on the whole discouraged about Whitehead's method ever becoming a safe and desirable operation If, however, any one thinks otherwise, and desires to continue its use, he suggests the following precautions bear in mind that it is never necessary to completely dissect out all the enlarged veins If considerable portions are removed, the remainder always shrink away, therefore, make the lower incision somewhat above Hilton's white line, even if there are external piles temporarily left below it, and in like manner make the upper incision low down, cutting off the cuff somewhat below the top of the internal piles, thus saving as much of the tactile mechanism of the lower rectum as possible, for the special sense located in this tract is of great importance to the patient's future comfort Finally, the surgeon should remember the peculiar difficulty of the antisepsis and be diligent accordingly in attempting it

Dr Christian Fenger, of Chicago, made some extemporaneous remarks on plastic operations on the hand to remedy deformities caused by injuries and burns, and exhibited a patient upon whose hand he had performed a successful plastic operation

Dr J A Baughman, of Neoga, followed with a paper entitled

A CASE OF UMBILICAL HERNIO-LAPAROTOMY, AND AN ENTERECTOMY

In the first case, a patient 40 years of age, weight 235 pounds had for four years suffered from a painful umbilical hernia of about the size of an orange The operation was done in the usual manner Four and a half months after the operation, she returned with a knot the size of a hazel nut, detectable but not visible near the seat of the operation The author cut down upon it and found it to be an epiploni-phalocele

The second case was an enterectomy in which eighteen inches of the small intestine were excised

A PLEA FOR MODERN CÆSAREAN SECTION

This paper was read by Dr C P Harrigan, of Chicago The author prefaced his remarks by saying that craniotomy upon the living fetus is in direct violation of all accepted principles of modern surgery, that it is an irrational unscientific procedure from any standpoint The author made a strong plea for Cæsarean section, fortifying his position by numerous quotations from leading surgeons For instance, Professor Lusk said he had had five cases of Cæsarean section, three recovered, and two died The latter were both kyphotic dwarfs The operations were not especially difficult Death occurred at the end of a week from feeble vitality due to undeveloped lungs and heart In one case, the former weighed but eleven ounces, the latter about five ounces The mortality in kyphotic patients has been unduly great Dr Joseph Price says, "that craniotomy should only be performed upon dead children and monstrosities Upon healthy children it should never be resorted to" Price urges Porro's operation for prophylactic reasons

SECTION III

Section on Etiology, State Medicine and Medical Jurisprudence

Chairman, DR SANGER BROWN Chicago
Secretary DR WILLIAM BARNES, Decatur

The address of this Section was delivered by DR JOSEPH J KINYOUN, U S Marine Hospital Service Washington D C DR KINYOUN selected for his subject

THE MANAGEMENT AND CONTROL OF INFECTIOUS DISEASES IN MUNICIPALITIES

His object was not to enter into a discussion of all the details incident to the control and management of disease in municipalities, but to confine his remarks to a consideration of a class of diseases known as infectious or contagious

Cholera was dwelt upon at considerable length Some of the acutely epidemic diseases had in the past been indirectly conducive of great good to our present civilization Cholera had pointed out the danger from polluted water and had been largely responsible for a pure or better water supply for our cities By way of contrast typhoid fever and tuberculosis were cited as examples If we compare the mortality of one of these with that of cholera, the difference is strikingly in favor of cholera

A few cases of yellow fever in one of our Northern cities would not, in the present state of our knowledge, be a menace It can be easily managed Disinfection of the infected apartments and their contents will be all that is required

Typhus fever, while resembling in many respects yellow fever, differs materially in the manner of its spread It is a house disease, and is due to unsanitary conditions for its propagation It is far easier to handle than yellow fever

Smallpox appears even at the present time to be the *bête noir* of our civilization There is no necessity for the existence of this disease, said the author, at the present time if the least common sense were exercised in regard to it We know of the beneficent effects of vaccination and revaccination, and still we have plenty of it in our midst

From experiments made by the author he was of opinion that the great mortality from smallpox would be reduced by serum therapy

Tuberculosis was next considered, the author saying that there was no city, village or hamlet which escaped its ravages Tuberculosis, as now understood, is an infectious disease, its specific agent being a bacterium which is thrown off in the discharges of those affected with it It is highly communicable from one person to another

Typhoid fever may or may not be considered epidemically an infectious disease It depends entirely upon the channels of infection and the conditions of environment If the disease is contracted through a water supply, be it a well, or from a general supply, the importance of its recognition is unquestioned

Diphtheria Nearly every municipality which has seen fit to promulgate regulations for the control of infectious diseases has given prominence to the control of diphtheria It is preëminently a disease of communal life The fact of its attacking the young makes it more to be dreaded as a school disease The author then dwelt upon the methods of making cultures in cases of suspected diphtheria, and considered the following subjects *seriatim*—notification, disinfection, house disinfection, preventive disinfection, and ambulance

DR. N S DAVIS, of Chicago, read a paper entitled

THE PRESENT STATUS OF BACTERIOLOGIC INVESTIGATIONS AND THEIR RELATIONS TO ETIOLOGY AND THERAPEUTICS

The two leading facts which Dr Davis desired to emphasize in his paper are 1, the constant tendency on the part of the profession to draw hasty conclusions from incomplete investigations, and, 2, the failure to hold fast what appears well established in the past until the actual bearing of new facts or discoveries can be fully ascertained In no other field of investigation is there so much caution and patience required as in that of therapeutics or the direct application of remedies in the treatment of disease And there are certain well established facts that must be constantly kept in mind by every investigator if he would avoid error

1. It must be remembered that all acute, zymotic and epidemic diseases are self-limited in duration That is, they are either cured or kill the patient within a limited period of time Each case has its initial stage of development, of active progress, culmination and decline, because the physiologic processes of every living body tend to either destroy or eliminate every disturbing agent that has found entrance into it Therefore, the first step in all reliable therapeutic study is to know the natural tendency of the disease we propose to treat, the average duration of each stage and if possible, the natural processes or channels through which the offending cause is destroyed or eliminated Without such knowledge of the disease, all exhibition of new remedies is only blind chance experimentation, and as likely to hinder or embarrass the natural processes as to facilitate their beneficial work

2 In comparing the success or beneficial effects of one remedy with another it must be remembered that all acute diseases vary in their severity and fatality in different years in different localities the same year, and in different individuals in the same locality Also that all epidemics are less fatal during the period of their decline than at the period of invasion Consequently the real value of no remedy can be determined until it has been tested by many persons at different periods of prevalence of the disease and at different stages of epidemic progress

3 It is necessary to know the nature and actual [illegible] *operandi* of the remedy we propose to use

Finally when a microorganism [illegible] is found in connection with any disease the first question to determine is Does it stand in the relation of a cause or an effect of the morbid processes constituting the disease? These are fundamental propositions without observance of which we are constantly led into erroneous conclusions and contradictory results

DR GEORGE H WEAVER, of Chicago read a paper on

THE BACTERIOLOGIC DIAGNOSIS OF DIPHTHERIA [illegible] ITS [illegible] AND ITS TECHNIQUE

The author emphasized the importance of a bacteriologic examination of all cases of sore throat in which there is any pseudo membranous formation and of every sore throat even if no such formation is present in case children are liable to exposure

The most important reasons for having a correct diagnosis may be stated as follows

1 The treatment of the individual case would be modified by it The diphtheria antitoxin is useful in only such cases as are caused by the diphtheria bacillus, and as it is not certain that it is absolutely harmless it should for the present at least, be used only after a positive diagnosis except in very urgent cases

2 The finding of the diphtheria bacillus would necessitate an absolute isolation of the patient however mild the attack until virulent bacilli were no longer present The virulent bacilli persist in the throat and nasal cavities after apparent recovery and disappearance of the pseudo membrane for weeks at times and the only way to rationally limit the period of isolation is to insist upon its continuance until all possible danger of contagion is past—until virulent bacilli are absent If diphtheria bacilli are not found, there is little or no danger of contagion and isolation is not demanded

3 The disinfection which should follow in cases of true diphtheria, is thorough and complete while in the case of false diphtheria it is unnecessary

4 In the absence of a positive diagnosis by bacteriologic methods, at least every case of sore throat showing any pseudo-membrane should only be consistently managed by treating it as a case of diphtheria

Dr Weaver then discussed the questions of how the methods required may be adapted to various conditions of population, and the technique to be employed in each case

DR D D BISHOP, of Chicago, read a paper entitled

GENERAL MICROSCOPIC EXAMINATION OF THE BLOOD

When making an examination of blood in hospital practice where one has the apparatus necessary for a complete study, the author says the following observations should always be made

1 A count of the number of red and white corpuscles per cubic millimeter

2 An estimation of the percentage of hemoglobin present

3 A cover slip preparation of fresh blood is examined concerning the following possible conditions (*a*), apparent changes in the color of the red blood corpuscles, (*b*), changes in the size of the red blood corpuscles, noting whether there be present corpuscles much smaller than normal, microcytes, or those larger than normal, macrocytes, (*c*) changes in the form of the red corpuscles, poikilocytes, (*d*), the presence or absence of Laveran's organisms of malaria, (*e*), a number of spread cover-slips are then taken and preserved for subsequent examination by the color test, as recommended by Ehrlich

The Thoma-Zeiss blood counting apparatus is used in estimating the corpuscles The hemoglobin estimate is performed by means of Von Fleischl's hemometer

Though much has been done by Schultz, Bizzozero, Hayem, Osler and others, in the histology and pathology of the blood, by the study of fresh specimens, it was left to Ehrlich to introduce in 1878 the method of staining cover-slip preparations, which Dr Bishop then described

DR J L WIGGINS, of East St Louis, followed with a paper entitled

INFLUENCE, RESPONSIBILITY AND PROFESSIONAL DUTY OF THE PHYSICIAN IN MATTERS OF PUBLIC HYGIENE AS RELATED TO MUNICIPAL GOVERNMENT

Sanitary science broadens out and fills one with wonder as he contemplates the vastness of its application It is difficult for us to say just when to leave off and in what manner to enforce rules to the end that the community can be protected, and still retain the rights of the individual Shall the State undertake to say when and where we must bathe? What we must eat or drink? The kind and texture of our clothes? Hardly, yet the State has certain duties, and to the degree in which these are observed will she prosper The first and most necessary condition is in the selection of a capable and educated sanitary officer Each community of 10,000 should have a health officer or an assistant By this means the average of life would be raised and death and sickness reduced to a minimum

DR A C CORR, of Carlinville, read a paper entitled

EMASCULATION AND OVARIOTOMY AS A PENALTY FOR CRIME IN THE REFORMATION OF CRIMINALS

This paper formed the basis of a symposium of contributions which were read at the last annual meeting of the Society, and the various propositions contained in them were taken up and discussed *seriatim* Dr Corr said that the criminal defect is often a mental complex, a bi-product of apparently normal mental conditions of ancestors, neither of which were criminally inclined To have been inherited, it must be a like trait to that which was exhibited in the ancestors, one or the other He is acquainted with the Harry Hayward family on both sides, but they were not criminals He is also acquainted with a Methodist minister who had been a presiding elder, he and his wife are amiable people, and above reproach, yet their two sons are both criminals Some families are all criminal but one, and where is the flock without a black sheep?

The following officers were elected

President, Dr D W Graham, Chicago

First Vice-President, Dr J M G Carter, Waukegan

Second Vice-President, Dr T J Pitner, Jacksonville

Permanent Secretary, Dr John B Hamilton, Chicago

Assistant Secretary, Dr J R Hoffman, Ottawa

Treasurer, Dr George N Kreider, Springfield

Members of Judicial Council, Drs J F Percy, of Galesburg, J O DeCourcy, St Libory, and Carl E Black, Jacksonville

Chairman of Section I, Dr J F McAnally, Carbondale, Secretary, Dr C W Hall, Kewanee

Chairman of Section II, Dr J H Coulter, Chicago, Secretary, Dr L C Taylor, Springfield

Chairman of Section III, Dr H N Moyer, Chicago, Secretary, Dr W R McKenzie, Chester

Next place of meeting, Ottawa, third Tuesday in May, 1896

Committee of Arrangements, Drs J W Pettit, T W Burrows, E H Butterfield and E W Weis, of Ottawa

Committee on Necrology and Biography, Drs J H Hollister, Chicago, O B Will, Peoria, and E J Brown, Decatur

Committee on Medical Legislation, Drs C C Hunt, Dixon, B M Griffith, Springfield, J B Maxwell, Mt Carmel, and the President, *ex officio*

Committee on Medical Societies, Drs E J Brown, Decatur, Jacob Schneck, Mt Carmel, and W S McClanahan, Woodhull

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Medical Society of the State of Pennsylvania

Proceedings of the Forty-fifth Annual Meeting held at Chambersburg, Pa, May 21, 1895

[Special correspondence of the JOURNAL]

(Continued from page 893)

THE ADDRESS IN OBSTETRICS

was given by DR W B ULRICH of Chester After alluding to the origin of this appointment he spoke of the value of the papers under this head which had been presented He held to the opinion that labor is a purely physiologic function, there is no unnatural labor He divided labor into ordinary or uncomplicated, and exceptional or difficult labor The first comprise nine tenths of all, needing simply cleanliness and as little interference as may be Normal may be converted into pathologic by too frequent examination Laceration may be caused by the desire to hurry things In the majority nature is competent, needing no assistance The woman can not be compared to a case of amputation, with the expectation of blood poisoning, needing vigorous antisepsis to prevent it Otherwise how could the human race have survived all these dangers? How about savage races, with their barbarous methods? He is also opposed to instrumental delivery to suit the convenience of the physician We should learn when not to use the forceps Traumatism may result and a dangerous train be fired Consider only the patient The duty of the obstetrician is cleanliness or asepsis -He believed with the old country doctor, who boasted that plenty of lard and a good deal of patience were all the instruments he wanted He insisted upon the usefulness of a warm soap and water bath at the beginning and a douche to cleanse the birth canal, especially if the patient does not seem cleanly, yet was opposed to repeated douchings and irrigation of the uterus after labor, except where absolutely indicated to overcome an actual septic state, due to retained placenta, etc Chemic disinfectants are not required and their routine use is to be deprecated On the other hand, he commended the practice of rendering the hands of the obstetrician and all instruments used by him as aseptic as possible by the abundant use of soap and hot water Follow this by a rinsing with solution of bichlorid 1 to 2000 Thus puerperal septicemia may be eliminated By this plan Dr Joseph Price claims that he has not had a case in nearly 10,000 labors Again we may thus abolish ophthalmia neonatorum Three-fourths of the blind asylums might be closed He did not attempt to give a record of his cases, but in a practice of forty-six years his obstetric cases had run into thousands, yet he had never had a dozen sore eyes, and not a single infant had lost its sight He had never lost a case in labor He alluded to the law framed by a committee of this society to prevent blindness, making it incumbent upon midwives, etc, to see that an infant with sore eyes shall receive prompt attention that its sight may not be lost He approved of this, but still considered prevention better Absolute cleanliness in the conduct of labor is conducive to the best interests of both mother and child He frowned on the fad of routine use of anesthetics in labor Who can tell the effect of these pains, the result of Nature's force? Anesthetics, the hasty removal of the placenta are fruitful of post-partum hemorrhage, and of asphyxiated infants Unless there is good reason, the ergot should remain in the bottle, as well as the castor oil, quinin and the malt liquors Let well enough alone

Meddlesome midwifery is bad, so is officious medicine giving In case of eclampsia at term, and in placenta previa requiring rapid delivery he spoke highly of the method of rapid manual dilatation and delivery of Dr P A Harris of Paterson, N J, first described in the *American Journal of Obstetrics* last year Dr Harris reported his experience in placenta previa and eclampsia, that in all cases there were no labor pains or partial dilatation before he attempted delivery, he had not lost a single case Since the introduction of asepsis, symphysiotomy has been revived and is largely practiced with increasing success He quoted from the paper of Dr Fox of last year and also from Dr Harris of Philadelphia, who is now enthusiastic for this operation He described the operation as performed by Professor Farabouef The woman is placed in the dorsal position, thighs abducted, flexed on the abdomen, the pubic region shaved, this and the adjacent parts washed with soap and water, then with sulphuric acid, finally with bichlorid solution The patient is fully anesthetized, catheterized and a vaginal douche given The length of the incision varies with the *length of the symphysis*, it must be made vertically, midway between the two pubic spines, beginning at the level or a little above the superior border of the symphysis, descending to its inferior border, deviating in the region of the clitoris without touching superior part of the vulva Then cut through all the soft parts down to the cartilage not stopping to seize vessels Then upon the index acting as a guide, with the scissors divide the fibro cartilage at the level of the anterior surface and superior border of the symphysis Then we make two small incisions transversely, beginning at the median line close to the superior border of the symphysis in such a way as to cut through the aponeurotic tissues in order to make a passage for the index, which is then introduced along the posterior surface of symphysis The finger then feels very well the posterior prominence of the fibro cartilage of the symphysis Left in this position it serves as a protection to the organs lying posterior to the symphysis With a straight scalpel begin cutting the cartilage from before backward and from above downward, and finish the section by means of a blunt pointed bistoury At the moment of cutting the sub pubic ligament, by means of a sound in the bladder the assistant pulls the urethra out of the way The incisions through the cartilage are kept up as long as the knife continues to creak, for the latter indicates the resisting cartilage and ligaments giving way Finally the iliac bones in a measure separate The assistants now practice slow and progressive abduction of the thighs The cartilages separate one then two fingers are introduced Experience teaches no damage can be done to the articulations by a separation of 7 centimeters When this is reached, the assistants are warned not to move and a tampon is placed in the wound either of sponge cotton or iodoform gauze We now extract the fetus apply the forceps and pull, the head descends, separating the pubis if not already sufficient Do not exercise too much force Let the head rotate Now Dr Varnier in order to protect the vulva, etc has the assistants approximate the thighs causing the iliacs, etc, to resume the normal position and the head is delivered without injury to the inferior osseous and muscular straits or vulvar orifice

The operation is terminated, a vaginal injection is given the placenta removed the vagina packed with gauze and next the pubic wound is cared for The tampon is removed the wound irrigated with a 5 per cent carbolic solution the assistants approximate the iliacs by continued pressure on the hips and the operator sutures the tissues with two or three buried sutures, and as many as needed to keep the parts in apposition The wound is covered with gauze and absorbent cotton A tight bandage is placed around the pelvis, this covered with a second in the form of a T A third supports the parts and for this plaster of Paris is used This is applied in an oblique position to leave the pubic region free and for future dressings and these must be removed as soiled at least twice a day for they are always soiled at micturition The vaginal dressings may be allowed to remain two or three days as it insures antisepsis of the vagina, and we can dispense with the injections otherwise needed The limbs must be immobilized by strapping About the eighth day the wound has cicatrized Often the edema has caused the sutures to cut through These may be taken out at the rate of one or two a day

This operation saves the child, with a minimum of danger to the mother It is far preferable to the Cæsarean operation or craniotomy

In concluding, he alluded to labor delayed by unusual positions He had not found it an easy task to change a malposition With the present asepsis we should more commonly resort to the effort to change vertex posterior into anterior For many other treatments in complicated labor, special training and sound judgment are needed In conclusion, he made a plea for careful diagnosis and not too much zeal for manual and mechanical interference

Dr T J Mays, of Philadelphia, read a paper on 'Fat in Pulmonary Consumption" Fat is one of the most important constituents of the body It always diminishes in pulmonary consumption It is a special secretion and is manufactured out of carbohydrates, proteids and fats, but for fattening purposes proteids and carbohydrates are superior to fats and oils, and therefore the latter are over-rated in the treatment of consumption, although valuable adjuvants It is also shown that resting the invalid promotes the formation of fat, while exercise retards it that in all probability the production of fat is under the control of the nervous system and that strychnin through its stimulating influence on the nervous system fattens the consumptive and increases the number of his white and red blood corpuscles He gave short abstracts of the histories of fourteen patients, who were treated in accordance with the principle advocated here, which show a total increase of 350 pounds, or an average gain of nearly 22 pounds

"Ligation of Arteries in Malignant Disease," was read by Dr John H Packard, of Philadelphia He spoke of the limitations of surgical treatment of malignant disease of the conditions causing suffering and demanding relief, then of the dangers, finally he detailed the conditions under which the ligation of arteries may be available to afford relief, or facilitate further treatment He concluded by quoting cases which appeared to uphold his method by the good results obtained

Dr Jane K Garver of Harrisburg, read a paper on 'Heredity," which was an effort to show something of heredity and its power in the causation of insanity, something of the increase of the same as shown by statistics, with her view of the reasons for that increase, as well as the desirability of inaugurating new methods in the prevention of insanity

Dr H G McCormick, of Williamsport, presented a paper on "Management of Cases of Typhoid Fever He had employed guaiacol with most excellent results

'Labor complicated with Typhoid Fever,' was the title of a paper by Dr W M Findley, of Altoona Case was taken ill three months prior to accouchment with the usual symptoms of high range of temperature, etc As there were three other cases in the house the case was an undoubted one Progress of disease was normal but severe In due time labor set in at full term second birth, vertex position The bowels became much relaxed, evacuations frequent and copious By the liberal use of stimulants and application of the forceps labor was terminated in four hours child alive Mother made a good recovery child was minus the epidermis as though parboiled, but is living at the age of 21 years though not strong

Dr T Diller of Pittsburg read a paper on the "Influence of the Mind in the Treatment of Disease"

On motion of Dr J [illegible], of Lititz it was resolved to send delegates each year to the Pennsylvania Pharmaceutical Society

On motion of Dr S Solis Cohen the exhibition of drugs was to be restricted to the pharmaceutic preparations known as to their ingredients, etc

In the evening the session was resumed at the Wilson College for Young Ladies After some musical entertainments Dr John B Roberts delivered the Presidential Address His subject was

THE PRESENT ATTITUDE OF PHYSICIANS AND MODERN MEDICINE TOWARD HOMEOPATHY

This address presented in a semi popular manner the differences between modern or rational medicine and homeopathy quoting the definitions given by standard dictionaries

Homeopathy, as advocated by Hahnemann, was described as a school of medicine, while non sectarian medicine was designated as a science, since it is in no way founded upon a theory or hypothesis, but the result of investigation of chemic physiologic and physical facts The reasons were given which prevent the physicians who subscribe to no dogma from accepting the doctrines of Hahnemann The statement was made that many physicians who are called homeopathists are not believers in all of Hahnemann's theories Long quotations were made from Hahnemann's "Organon" and recent homeopathic writers These quotations showed that there are still some homeopathic physicians who believe in the increase of drug power by diminishing the dose and in the efficacy as a means of treatment of the so-called universal and infallible law of "similars" The attitude of physicians who accept no sectarian name was said to be a dual one Some of them hold that homeopathists who do not believe in the universality of Hahnemann's law should make a public formal statement before being admitted to the right of consultation with members of the non-sectarian medical organizations Others believe that the profession and the public would be benefited if a graduate of a homeopathic college or a member of a homeopathic society, who simply indicates his willingness to treat patients by all means, should be admitted to the rights of consultation

The author did not indicate to which of these classes he belonged The paper was not written in a controversial spirit but seemed to indicate that the author desired to permit the hearer to draw his own conclusions as to the relative merits of the case

The sessions were resumed at 9 A M, Thursday Dr F X Dercum, of Philadelphia, delivered the

ADDRESS IN MENTAL DISEASES

The peculiar position which insanity has occupied in the past, in the minds both of the laity and of medical men was first dwelt upon, and also the further fact was emphasized that the first attempts to provide for the insane were purely of a practical and utilitarian character and embraced little more than the isolation and housing of the insane The present status of the pathology of insanity was then taken up The speaker alluded to the researches of Golgi, Raymond y Cajal, and especially to the investigations of Lloyd Andriezen It was pointed out that through these labors the structure of the normal cortex was at length being revealed and further that, as Andriezen had shown, we were now in a position to correlate symptoms with change of structure, at least in certain forms of insanity, for example, alcoholism In the latter disease there are not only evidences of gross and general nutritive changes in the cell bodies, but also alteration and destruction of the fine naked collaterals and nerve terminals of the molecular layers of the cortex These changes explain the diminished sensitiveness of the alcoholic subject to impressions from without and also the general loss of memory and lack of association of ideas Here was the first instance in the history of insanity in which it has been possible to correlate, closely, structural change and symptom It was, however, pointed out that while such results are sufficient where the poison producing the changes is definitely known, microscopic examination can not give us all the information that we desire when the initial cause is not known At most, it can only reveal to us the effects of preexisting causes, and leaves us in the dark as regards the causes themselves This fact led to the consideration of the subject from another aspect The conviction is steadily growing in the medical mind that the actual agents which produce tissue changes are chemic toxic substances of one kind or another, some of them absorbed or ingested from without, others the poisons produced by altered tissue metabolism and others, still, the poisons elaborated by bacteria The evidence upon this subject was briefly reviewed, especially with reference to the toxicity of the blood, the urine and other tissues in various conditions The toxic substances themselves were classified as follows

1 Those which though normal to the blood and urine in certain quantities, become toxic when in excess In such conditions there is an intoxication of the nervous system from the mere accumulation of tissue waste

2 Substances which are present in the various diathetic insanities, some of which in small quantity are normal to the urine, while others are entirely new and foreign

3 Substances which result from disordered visceral action Regarding these we have but little definite information Enough is, however, known regarding the diseases of the kidney and diseases of the liver to indicate that the insanities associated with these conditions are in all probability the result of auto-intoxication

4 The toxic substances absorbed from without (excluding all poisons ingested as such) From much that we know we have reason to infer that in certain pathologic conditions poisons are formed in the stomach and intestines which react profoundly upon the nervous system

5 Toxins which are elaborated by bacteria

The various intoxications of the nervous system resolve themselves into two great groups, first, the auto-intoxications properly speaking which embrace, first, the substances normal to the blood and secretions but present in excess, then, those substances due to general disturbance of tissue change which we meet with in diathetic conditions, and, last, the poisons formed by the disordered action of special viscera

In the second group we have those substances absorbed from the intestinal tract, some of which are produced by disordered chemic action and morbid fermentation, and others which are normally excreted by the intestinal tract but now re absorbed, then we have the poisons which are the direct results or accompaniments of infection It was further pointed out that the various symptom groups which we recognize as forms of insanity may result from the most diverse agents

A plea was then made for the establishment of laboratories in hospitals for the insane, in which not only microscopic studies based on the methods of Golgi, Cajal and Andriezen might be made, but in which also the chemistry and the physiologic action of the various toxic substances existing in the blood, urine and tissues of the insane could be experimentally studied Such investigations would be of great practical importance They would enable us in the first place to treat insanity more intelligently, and indirectly would diminish the expense of the maintenance of the insane by the State

Dr S Solis-Cohen, of Philadelphia, gave in detail the "Modern Method of Diagnosing Gastric Lesions"

Dr G G Groff, of Lewisburg, on "Typhoid Fever and its Relation to Filth," showing the great need of more care as to the contamination of wells, cleanliness in the dairy, etc

Dr Edwin Rosenthal, of Philadelphia, read a report of a

SERIES OF CASES OF LARYNGEAL DIPHTHERIA (SO CALLED MEMBRANOUS CROUP) TREATED BY ANTITOXIN, WITH AND WITHOUT INTUBATION

After brief mention of the historical discoveries in bacteriology leading to the latest method of treatment, he gave a summary of his work He divided the cases into two groups one upon whom the operation of intubation was performed, and another group where this operation was not a necessity In those cases—nine in number, treated without intubation, all recovered In those cases—eleven in number, treated with intubation, two died and nine recovered, making a mortality of 18 per cent Combined statistics before the advent of antitoxin, in cases treated by intubation showed a mortality of 72 per cent,, that is, 28 recoveries in 100 Dr Rosenthal's own statistics in a former paper showed a mortality of 62 per cent, 38 recoveries in 100 In juxtaposition to this, the combined statistics of antitoxin treatment have shown a marvelous reduction in the death rates Dr Rosenthal's work was mostly done with Behring's antitoxin though he has used Aronson's, Gibbier's, and McFarland's antitoxin, almost all his cases recovering makes their value equal The German antitoxin, however, brought quicker reaction than the domestic, and for that reason was superior Dr Rosenthal's conclusions are antitoxin is a specific in diphtheria In early cases, those seen in one or two days after infection, no death rate should be recorded In laryngeal diphtheria (the so called membranous croup) antitoxin is especially indicated It should be used in every stage or date of the disease no matter how late we see the case, its influence can be proved, for cases of laryngeal diphtheria perish from suffocation long before any toxic symptoms could be manifested For that reason he strongly urges the necessity of prompt intubation when indicated, even before the injection of the antitoxin Regarding the use of antitoxin he said Do not delay or hesitate in this disease because the case is not so bad, or because it might get well without it, but use it at once—the earlier its use, the more certain its success

Dr Harrison Allen, of Philadelphia, read a paper on

ADENOID GROWTHS OF THE PHARYNX

In addition to the symptoms ordinarily associated with hypertrophy of the adenoid growth, Dr Allen described a group of cases in which the obstruction is due, not to a growth being larger than normal, but to a congenitally narrowed naso-pharynx He laid especial stress upon a third group of cases For these he proposed the name "adenoid disease," and claimed that it does not excite mischief by reason of its influence, in any way, upon the functions of respiration, or excite catarrhal disease, but that its effects are noted entirely upon the general nutrition of the patient which is always abnormal He suggested that the relation of these phases of ill health belongs to the same group of diseases with acromegaly and myxedema He invited attention to the advisability of studying the adenoid mass in connection with the pituitary body and pineal gland, and made the request that in all cases of death of children, who are known to suffer with adenoid growth in addition to the cause of death, that the base of the skull embracing the pituitary body and the adenoid of the pharyngeal vault be removed in a single piece and prepared in the usual way for microscopic examination

Dr F S Nevling of Karthaus read a paper on the "Alcoholic Bath in Eclampsia and Suppression of Urine"

Dr H F Hansell of Philadelphia,read a paper on "A Clinical Contribution to the Study of the Relation of Convergence to Accommodation" This was a report of a case of divergent strabismus of many years' standing, in which binocular fixation was impossible without the sacrifice of clearness of distant vision Each eye was practically emmetropic and had no organic defect and either could be used in fixation There was no assignable cause for the anomaly The interest of the case lies in the transient power of binocular fixation accomplished only by conscious effort and with the simultaneous contraction of the ciliary muscle by which myopia of 3 5 D was invariably acquired, to disappear immediately when the divergence of the optic axes was restored The association of the function of the accommodation with that of convergence where the primary stimulus is directed to the interni instead of the ciliary muscle is thus demonstrated, just as, reversely, normal contraction of the accommodation induces normal convergence and pathologic contraction pathologic convergence, instances of which are exceedingly common and indisputable

Dr Benjamin Lee of Philadelphia, presented an abstract of a paper on the

EMOTIONAL BRAIN

A recent novel which has commanded general attention contains a vivid picture of a somewhat unusual case of nervous disease It is very boldly drawn and with few strokes, the description being not that of a scientist but of an acute lay observer I give it principally in the author's words "A gifted young artist, little more than a boy, of a temperament sensitive, emotional and high strung, receives a sudden and terrible shock, in the loss of the woman whose love he has just succeeded in winning, and whom he in turn loves to distraction An outburst of stormy and semi maniacal rage followed the discovery" "And finally he gasped, screamed and fell down in a fit on the floor" Little Billee's attack appears to have been a kind of epileptic seizure It ended in a brain fever and other complications—a long and tedious illness At the end of a few months spent in his native village, his health returns, he takes his part in the social life of the village, and awakes one morning to find himself famous, his pictures painted while he was in Paris having achieved a distinguished success" "But one thing constantly preoccupied and distressed him—the numbness of his affections" "It was as though some part of his brain, where his affections were seated had been paralyzed, while all the rest of it was as keen and active as ever"

His own diagnosis of his case occurs in a monologue held with an amiable dog of the name of Tray "Wait," he says, 'till you get a pimple inside of your bump of—whatever you keep your fondness, Tray For that's what's the matter with me—a pimple—just a little clot of blood at the root of a nerve, and no bigger than a pin point" Thus much as to the clinical picture What shall we say as to the diagnosis made by the patient? To a certain extent it is correct There is a lesion of an important nerve center It may be, in his unscientific language, "a spot, or knot, or a blot, or a clot" We often come no nearer an accurate description of a pathologic condition which is paralyzing this nerve mass But he mistakes in locating it in either the cerebrum or the cerebellum For every human being has two brains, a thinking brain and a feeling brain, a rational brain and an emotional brain, a brain which ponders and calculates, and schemes, and records impressions of the outer world and a brain which loves and hates, rejoices and grieves The rational brain is situated in the cranium, the emotional brain in the abdomen In common parlance we speak of their respective functions or manifestations or resultants as mind and heart As anatomists we know that the heart, being simply an ingenious pump, has nothing to do with the case any more than "the flowers that bloom in the spring" The particular viscus from which the affections emanate and which was the seat of Little Billee's malady, is the solar plexus, composed of the two semi lunar ganglia, with the wonderful interlacement of nerves and tissues and ganglionic enlargements which bind them together, and at the same time associate them with the sympathetic and cerebrospinal nerves and ganglia The old anatomists showed a correct appreciation of its importance in naming it the solar plexus, for it is indeed the sun of the system, radiating light, warmth and joy to its remotest parts

What do we know of this important organ? Little enough It is probably safe, however, to attribute principally to its abnormal action or condition, three, by no means uncommon and very intractable affections, hysteria melancholia, and hypochondria Of acute diseases the only one which we can reasonably consider as directly affecting the solar plexus is epidemic influenza, and I know of no other way of accounting for the protean manifestations of that malady, and for the profound and abject despair which is so constant a manifestation of it

If we know little of the pathology of this organ, we know still less of its therapeutics

Physics, rather than physic, however must furnish our armamentarium for the treatment of disorders of this important nerve center The imponderables—light, heat, electricity, and that which includes, involves and evolves them all motion, are the agents on which we must place our main dependence

Motion is administered in the form of exercise in its ordinary sense, of Swedish movements and of massage In cases in which the patient is unable to take the ordinary exercise, the movement cure provides an admirable substitute affording us the advantage of exercise without the expenditure of nerve force This should always be accompanied by massage, and, indeed, in a large number of cases the latter alone can be resorted to Its application includes the four well known divisions of kneading, stroking, friction and percussion, which should be varied to suit the requirements of each particular case The form known as vibrations is of special service in these conditions They may be applied either by the hand of the manipulator or, much more effectively by means of a machine constructed for the purpose In this way, vibrations of excessive rapidity may be communicated to any part of the body for any required length of time The abdomen, epigastrium and dorsum are the proper points for application in the affections under consideration This therapeutic means produces a profound impression on the nutrition and the cellular activities of the nervous tissues, and should therefore, like galvanism be used with caution and discretion

My object in bringing this subject before the society has been to call attention to a neglected and, as I believe, fruitful field of research, and to urge upon those who have the time, the facilities and the training, the importance of losing no opportunity of prosecuting microscopic and laboratory investigations into the pathology and the cellular affinities of the great solar plexus

"A Contribution to the Study of Deaf mutism," was given by Dr A A Bliss of Philadelphia An examination of the ears, together with a study of the personal and family histories of 516 deaf mutes, pupils in the Pennsylvania Institution for the Deaf and Dumb, indicates that strictly congenital deaf mutism is a far from common condition On the contrary, the finding in this large series of cases indicates that loss of hearing in the majority of instances resulted from inflammation of an early infancy origin Resulting from such processes we find three conditions of the ears 1, a slow, non suppurative, sclerosing process, which has immobilized the sound conducting apparatus, 2, a condition of sclerosis after suppuration, the drum head being destroyed in varying degree and the mucous lining of the tympanic cavity changed to a dermoid or fibrous tissue, 3, a suppurative process still active, which has caused simply a chronic otorrhea without much loss of tissue, or may have caused total destruction of the drum head, exfoliation of the ossicles, necrosis of the tympanic wall and the development of cholesteatoma Consanguinity of parents must be recognized as a causative element in deaf mutism, but is not peculiar in any special liability to cause serious affections of the ears in the children of such unions In such instances deaf mutism is simply one of the manifestations of physical degeneration just as phthisis, idiocy, epilepsy, cretinism insanity and functional or organic abnormalities in the cerebro-spinal or lymphatic systems may also be manifestations of a physically degenerate race The examination in addition, indicated that a tendency may exist in certain families to develop aural disease attended with deafness more serious and profound than would commonly follow such conditions in more normal individuals Thus one fifth of the entire 516 pupils had deaf mute relations, and in some instances belonged to families all of whose members were deaf mutes The results of the examination favor the belief that in a vast number of instances the recognition of otitis media, originating primarily or as a complication in other diseases occurring in infancy or in early childhood, and the proper treatment and after treatment of this aural condition, would have preserved the hearing of many of the 516 pupils and would have saved them from becoming deaf mutes

(*To be continued*)

Rhode Island State Medical Society

Eighty fourth Annual Meeting held at Providence, R I, June 6

The meeting was called to order by Dr Robert F Noyes, and the recording secretary, Dr W R White, announced as the result of the annual election of officers the following

President—Elisha P Clark, Hope Valley

First Vice President—William A Gorton Providence

Second Vice-President—Francis H Rankin, Newport

Recording Secretary—Frank L Day, Providence

Corresponding Secretary—George D Hersey, Providence

Treasurer—George L Collins, Providence

Censors—J W C Ely Benjamin Greene, Eugene Kingman, J H Morgan, G W Jencks, H G Miller, W R White, F H Rankin

Board of Examiners—Franklin M Eaton, Fred T Rogers, Herbert Terry, Frank L Day, John W Keefe

STANDING COMMITTEES

Of Arrangements—E F Walker, J W Keefe, F E Peckham

On Publications—G D Hersey, C M Godding, G T Swarts

On the Library—H G Miller, G D Hersey, G W Porter, G L Collins, F L Day

On the Museum—W J McCaw, G T Swarts, F B Fuller, C M Godding, S A Welch

On Necrology —E Kingman, C H Leonard, H C Miller
Auditor—F H Peckham Jr

Dr George L Collins presented the annual report of the Trustees of the Fiske Fund, giving a record of the meetings held and the financial condition The amount of the fund is $9,532 58, and the amount at the disposal of the committee is $959 52 No premium has been awarded this year, as no essay has been received The subject proposed for 1895 is "The Etiology, Pathology and Treatment of Diseases of the Prostate Gland" The premium offered is $300

The society decided that Providence should be the place of the next meeting

The deaths of Peter H Madden of Woonsocket and Frank L Forsyth of Providence were announced

Dr T D Crothers of Hartford, and Dr E H Davis of Plainfield, were introduced as delegates from the Connecticut Medical Society They spoke briefly Dr Newman of the New York Society was also introduced

Dr White read the report of the censors' meeting held earlier in the day

Dr Charles H Leonard opened a discussion on the nutrition of the very young child Dr J W Mitchell followed

Dr Frederick T Rogers read the essay entitled "Humbug as a Therapeutic Agent" He showed that superstition had ever had an important effect on human affairs Likewise, medical theories, now exploded, had a beneficial effect in their day They have had a good effect, both subjectively on physicians and objectively on the patients Certain alcoholic cures were, he said, undoubtedly, humbugs Whether these effects were due to hypnotic influences, the effect of a powerful mind over another, or to the giving up to nature and allowing her to do her own repairing, the Doctor could not say, but the facts showed there was need of less use of drugs and more attention to the nature of diseases The physician was advised to go to the quack for example upon this point

The Annual Address by Dr George F Keene was upon "Some of the Phases of Alcoholism" In introduction he said that the Legislature that passed a bill to suppress quackery had at the same time had under consideration an appropriation to promote quackery in the liquor cure bill To alcoholism, side by side with syphilis, were ascribed the greatest pathologic effects Alcohol was designated as not a real, but a supplementary food Its effect was greatest upon the brain It is the genius of degeneration Effects were specified upon the various parts of the nerve and arterial systems, and symptoms of alcoholism were described at length The hearers were warned against the worship of the "golden" calf of Keeley

At the conclusion Dr Noyes introduced the new President of the Society, Dr E P Clarke, of Hope Valley, as one ripe in years, rich in experience and loyal to the Rhode Island Society In assuming his new office Dr Clarke briefly replied

A vote of thanks was extended to Dr Noyes for the able manner in which he had performed the duties of President for the past two years

The annual dinner was held in the Trocadero following adjournment The unusually large number of 140 was present, including one lady member of the society Dr George L Collins acted as anniversary Chairman The speakers were Dr E P Clarke, of Hope Valley, who Thursday began his Presidency of the Society, Gov Charles Warren Lippitt, Samuel R Dorrance and Prof H C Bumpus, of Brown University

Dr Clarke spoke of the profession of the country doctor, to which class he considered himself to belong He said they were the hardest worked and poorest paid in the profession A great physician was allowed to profess ignorance of a particular case, but the country doctor must know everything Therein many of necessity fail In spite of his place in this class, he expressed the hope that the society would not lose ground during his term of office and asked for their sympathy and support

Governor Lippitt praised the society for its financial management of the Fiske fund, whereby it had increased 600 per cent, congratulated it for securing the passage of the bill to regulate the practice of medicine, and paid a tribute to the physicians who accompanied the soldiers to the battle field The State should be proud of the medical profession of Rhode Island

Samuel R Dorrance was asked to speak for the Rhode Island Hospital He is a former President and Secretary of the corporation and at present a member of the Board of Trustees He said that the origin of the hospital was among the men of this society In the face of poor success at first, they stuck to the project Even after its establishment the people looked upon it as a place where doctors tried experiments But there are now many evidences that the community realizes the value of the institution The present condition is due to the men of this society in giving their time, best thoughts and fruits of experience without price to the work

Professor Bumpus of Brown University, outlined the work that is being done for medical students at Brown, the increased appropriations making possible greater laboratory facilities, better apparatus, and more books Applications for the courses are increasing He thanked the members for their help to the college

During the afternoon the Fellows and guests visited the St Joseph's Hospital, and were there tendered a reception

NECROLOGY

Arthur E Durham, F R C S, Eng, Consulting Surgeon to Guy's Hospital, died May 7, aged 61 years, after a short illness, from acute pneumonia He was a native of Northampton, and entered Guy's Hospital in 1855 After distinguishing himself in the examinations at the University of London he took his Fellowship at the Royal College of Surgeons, England, in 1860 Two years later he was elected to the post of assistant surgeon at Guy's, and from 1873 to 1894 he was one of the full surgeons at the hospital On his retirement in 1894 he was appointed one of the consulting surgeons of the institution In the medical school attached to the hospital he lectured for many years on anatomy and surgery He took a prominent part in all the movements which had for their object the welfare of the students He was President until last year of the Students' Club, and of the Guy's Hospital Cricket Club Mr Durham's contributions to the literature of his profession were almost entirely limited to papers read before the societies, and articles to "Guy's Hospital Reports," Holmes' "System of Surgery," and Quain's "Dictionary of Medicine" In the former were published his valuable observations on "Sleeping and Dreaming," and the 'Physiology of Sleep," in which were recorded his memorable experiments to show the state of the circulation in the brain during waking and sleeping Mr Durham was one of the first surgeons in this country to take up the specialty of diseases of the throat and nose, and he was the designer of the lobster-tail tracheotomy tube which bears his name As an operator he was bold, neat and skillful Nature had endowed him with hands which must have been the envy of most surgeons who knew him, the fingers were long and tapering, as flexible as those of an accomplished musician, and full of grace of movement At the time of his death Mr Durham was a member of the Council of the Royal College of Surgeons, England, upon which body he had served eleven years In former years he served as vice-president Mr Durham was exceptionally well and favorably known to American surgeons —*London Medical Press*, May 15, 1895

Samuel Paterson Von der Smith, M D, of Bloomfield, N J, died Friday, the 31st ultimo, of tubercular enteritis He was born in Lancaster, Pa, in March, 1821, and was graduated in medicine from the now extinct school, the Philadelphia College of Medicine and Surgery, in the class of 1849 For several years he practiced medicine in New York He was examining surgeon of the New York Police Department for some time, and later was an examining physician of the Mutual Life Insurance Company At the opening of the war he was a surgeon in the 6th New York Cavalry, and afterward he was with the 16th New York Cavalry He served through the Rebellion Dr Von der Smith was in Washington when President Lincoln was assassinated by John Wilkes Booth He went with the party that chased the assassin across the Potomac into Virginia, and was present when Booth was shot He never tired of describing the scene He received a medal and a diploma for the part he took in running Booth down After the war Dr Von der Smith went to Arizona, and was attached to one of the regiments on the frontier as regimental surgeon He was acquainted personally with Generals Grant, Sherman and Sheridan, and he was a member of Cameron Post, No 79 G A R, of New York City He had lived in Bloomfield ten years

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SATURDAY, JUNE 15, 1895.

MORTALITY AND CAUSES OF DEATH IN MEDICAL MEN.

DR. KORTRIGHT has recently presented this subject in the Brooklyn *Medical Journal*, bringing out some very impressive and suggestive facts. He made a study of the mortuary records of four hundred and fifty physicians who lived and died in New York and Brooklyn, and the vicinity, during the past eight years. As the surroundings and climate were alike generally, the facts are of unusual interest. The average age of death was 54.6 years, and the mortality was 25.53. This mortality is only exceeded by saloon keepers, butchers, quarrymen, and poor factory operatives. Clergymen have a mortality of only 15.93, and lawyers 20.23, so that the practice of medicine is far more hazardous and perilous as an occupation.

Among the causes of death, suicide is four times more common among physicians than other adult males. This includes many cases of accidental poisoning, such as an overdose of some drug used by the victim, either addicted to the drug, or using it for some special purpose. Others died from bullet wounds of the head, the motive of which was not clear. Consumption was a very small factor as a cause of death, reaching only 10 per cent., while the ordinary death rates among adult males in New York are 19 per cent. of the whole number. Physicians have less than half the usual mortality from this cause.

Deaths from the latest fad, appendicitis, were one thirty-seventh of the whole, showing that physicians are not suffering from this trouble in the same ratio as other people. Typhoid fever appears to be exceptionally high as a cause of death, 4⅛ per cent. died from this cause. The usual rate among adult males is 1¼ per cent. Pneumonia furnishes a high death rate, 13 per cent.; in the adult male population the mortality is 14 per cent. Bright's disease, apoplexy and various forms of heart disease are grouped together as all having common pathologic conditions, viz., arterial sclerosis and degeneration of the muscular fibers. The mortality from these causes was 35 per cent., whereas the usual death rate from these causes among all male adults is only 25 per cent.

The conclusion is clear that these are the most common diseases that prove fatal among medical men. Arterial sclerosis was the cause of over a third of all the mortality. This is confirmed by English statistics. This means, briefly, that irregularities of the heart's action, from neglect of diet, sleep, nutrition, overeating, undereating, overwork and under exercise has left its impression in the thickening of the walls of the heart and arteries. The constant variation of the tension of the arteries has resulted in fibrinous deposits and inflammatory changes involving the kidneys, as well as the heart and arteries. Probably, defects of elimination are among the most common early causes of irritation and changes. This is followed by poisoning and starvation and increased functional activity of the heart in the effort for elimination. Then follows changes in the specific gravity of the blood from the retained products of metabolism and pathologic conditions which are expressed in the term arteriosclerosis.

It is the irregularities of living which make the physician neglect many hygienic rules that he forcibly impresses on his patients. He is often eloquent in his arguments and reasons for rest and change, and regular hours of sleep, to those who consult him. But, alas, he does not put into practice in his own case what he so urgently impresses upon others.

Physicians keep on, long after warning voices are heard of approaching dangers. Voices of palpitation, of arterial tension, of tortuous arteries and increased flow of limpid urine, and other unmistakable signs; voices of insomnia, indigestion, morbid anxiety, slow restoration when exhausted, loss of ambition and interest in things of the present. These voices tell of the approach of the end. There is only one way open for the future and that is to give up night work, and confinements, take a long summer rest, eat abstemiously, stop all drinks except water and tea or coffee, take exercise in the open air, and give careful attention to the function of the skin, avoid chills and worry and mental care and strain, and live carefully and quietly. Take this course, and we may expect to live many years and be of great service to those about us. Here is an open field for new studies—how to prolong and raise the life work of physicians.

ALCOHOLIC COMA, ON THE STREET

This Journal in its editorial columns has frequently called attention to this subject, and Dr L D Mason, of Brooklyn, N Y, recently read a paper before the Kings County Medical Society, calling attention to the frequent blunders made by policemen and ambulance surgeons in placing all cases found stupid on the street with an alleged alcoholic breath, in cells of station houses Dr John Morris, of Baltimore, Md, discussed this subject in the State Medical Society of Maryland seventeen years ago in a very clear paper Curiously, this failed to attract much attention in this country, but was translated and reprinted in many of the leading journals of Europe

The French Academy of Medicine took up the subject, and as the result of a very wide discussion, special laws were made, requiring all cases found stupid on the street to be taken to a receiving hospital where they could be examined and observed In London, the police were directed to take such cases to special emergency hospitals In many of the cities of the continent, similar rules have been enacted In New York and all the large cities and towns of this country, the diagnoses of such cases are made by the police and ambulance surgeons, or any one who may be passing The result is that a considerable number of these cases are found dead in the cells next morning Where an autopsy is made, hemorrhage, tumor of the brain, fracture of the cranium with concussion, Bright's disease, sunstroke, embolism, and other physical lesions are discovered If an inquiry is made into the history of the case, epilepsy, narcotic poisoning and heat or sunstroke appears For various reasons, spirits were taken shortly before the coma came on, and the breath determined the diagnosis These cases are treated roughly in the ambulance or patrol wagon, and with the slightest appearance of opposition are struck on the head, or shaken violently, to intimidate and keep them down Thrust into a cell to sleep off the supposed stupor of alcohol, the patient dies from neglect, and next morning the police surgeon certifies to death from alcoholism The case is recognized as a man of prominence and temperate, and an autopsy reveals the real condition There is no redress, and this is repeated in almost every city in the Union One week in August, last summer, five cases occurred in New York City These persons died in cells of the station houses, from hemorrhage, embolism and Bright's disease

Dr Mason's paper was an earnest protest against this practice, and he gave numerous facts and cases showing the great wrongs committed by having the diagnosis of such cases made by persons unfit and incompetent to judge

The Kings County Medical Society appointed a committee and passed resolutions, calling on the Health Board to make special provisions against t
evil As a result the Health Commissioner of
city of Brooklyn has ordered that all cases of co
found on the street must be sent to the hospit
The wisdom of this was clear the next week after t
rule went into effect, in the diagnosis of acute al
holism made by an ambulance surgeon, of a c
which proved to be one of fractured skull

Dr Mason read before the Neurological Secti
of the Association at the Baltimore meeting, anot
paper on the same subject, which was followed b
resolution urging physicians to petition authorit
in all cities to have these cases of coma cared
rationally This paper and resolution will app
later in the Journal Thus the good work of
Morris in 1878 which bore fruit in Europe, is n
taken up by Dr Mason, and will inaugurate a ger
ine reform all over this country in the near future

The criminal recklessness of the present pract
was recently illustrated in Philadelphia, where
police brought into the station a stupid, half-deli
ous man as drunk The next day he was fou
dead, and proved to be a clergyman, under tre
ment for Bright's disease, who went out for a wa
and probably took spirits for weakness, and w
arrested and hit over the head by the officer I
list of cases of this character is one of a promin
physician who was found dead in a station house c
His skull was fractured and the police record w
"drunk and stupid" He was a thoroughly temper
man, had not been robbed, and was seen in his us
health an hour before the arrest by the police T
inference was that for some sudden illness he h
taken spirits, and his skull had been fractured
blows of the officer at the time of the arrest O
readers will recall many similar cases and recogniz
radical reform in the present practice

RHODE ISLAND MEDICAL SOCIETY

The eighty-fourth annual meeting of this soci
occurred at Providence, June 6, a detailed notice
which appears in this Journal This society diff
from other State societies in many respects, and h
done some excellent work in scientific medici
Practically, all parts of the State are within an hou
ride of Providence, so that all physicians can atte
the meetings which are held four times a year Th
meetings open at 10 A M, and after the informal re
tion of cases, an essay and address follows, then
dinner and adjournment

The intellectual exercises are confined to t
hours, and the dinner another hour or more, t
whole not exceeding four hours, and the physician
home again in time for evening practice

The State is densely populated with a successi
of manufacturing villages and cities and physicia
have to do all-round practice of every sort T

surgery from the mills, and the fevers and epidemics of these villages, with faulty water supply and bad sewers, and a most changeable climate, along the bays and numerous rivers of the State, bring a variety of medical work that requires great versatility not common in other States, for "State" medicine or "sanitary medicine" is as much a medical specialty as ophthalmology or laryngology

Recently an act regulating the practice of medicine has been passed, requiring an examination of all physicians without a diploma from schools which did not require four years' instruction, and a certain preliminary training after July, 1895 In all cases of persons now practicing, a diploma, and evidence of respectable honorary practice from 1892 is required This act is regarded with great favor as the beginning of better legislation in the future Many parts of the State have large seaside summer villages of immense populations in the warm weather, and irregulars of all descriptions gather here This practice act will do much to drive out this class who live on the credulity of their patrons

Although in close proximity to Boston and New York, the Rhode Island physicians have retained the original Quaker independence of thought and action that has always marked the people of this State Grave questions in surgery and general practice are largely settled at home by local experts, and the distant consultant is rarely seen New medical works always have a large sale in this State, and the State Society has accumulated a very large library which is open to members

Three years ago a medical monthly was started in Providence, which has now become a weekly It is edited by a large number of local and foreign physicians, and has the promise of being a very noted journal in the future A most commendable feature of the Rhode Island Medical Society meetings, is to have only one or two papers, and give the author ample opportunity to present the subject fully and clearly In the meeting mentioned, Dr Rogers' essay on "Humbug as a Therapeutic Agent," discussed the credulity and superstition which has been associated with medicine for ages He mentioned some of the great medical superstitions of the past, now exploded, which had a beneficial effect, both subjectively and objectively on the physician and his patients He cited the alcoholic cures of the day as examples of quackery doomed to an early death

The annual address by Dr Keene treated of the "Drink Problem," and the need of a medical study of cases which now come under the care of quacks He called attention to the boldness of the "gold" curers, who had come before the Legislature claiming recognition, particularly asking the State to assist in promoting quackery of the worst form Both the essay and address were admirable discussions of topics that every physician should be familiar with, and be able to teach authoritatively to his patrons

It is undoubtedly true that physicians do not give sufficient attention to mental therapeutics and the essentials, to inspire the confidence and trust of their patients, and thus neutralize some of the credulity which supports mind cures, gold cures, drug cures, faith cures and other 'isms The coming physician will make use of many of the means now despised, and accomplish results now deemed impossible

THE MICHIGAN STATE MEDICAL SOCIETY

The thirtieth annual meeting of the Michigan State Medical Society was held in Bay City, Mich , June 6 and 7, under the presidency of Dr H O Walker The attendance was representative in character and equal to the average in numbers The local committee had made abundant provision for the convenience of the members, and with tireless endeavor promoted cordial goodwill, so that the meeting was without friction in any respect

It was gratifying to have the committee report the enactment of a law by the Michigan State Legislature to prevent blindness, by compelling attention to the purulent ophthalmias of the newborn, but sadly disappointing to learn from other committees that the bill to regulate the practice of medicine failed to become a law—after the manner of many previous attempts, and that the bill to secure a registration of births and deaths in accordance with common sense, had also failed to become a law Michigan, still, by deliberate act of its Legislature, remains the dumping ground for the world's incompetent and dishonest doctors

The society made a notable change in its requirements for membership, in that it admitted two physicians whose entire medical education was obtained in "homeopathic" medical colleges It was stated by a member upon the floor of the house that such action was contrary to the Code of Ethics, so that the action was taken deliberately and with full knowledge of the facts, a fact the more noteworthy because last year this society refused to entertain the idea of changing the Code of Ethics in any particular

The scientific work of the society is done in three sections These were all well attended, the papers of scientific and practical interest, and intelligently discussed As the papers numbered fifty it will be apparent that the sessions of two days and one night were needful in order that the work be accomplished The arrangement of the first session of each of the sections was peculiar, in that it was devoted to the consideration of a series of papers discussing different phases of a single topic, thus the surgical section discussed urethral surgery, the medical section diphtheria, with the antitoxins, gynecology, malignant diseases of the uterus The papers prepared for these several discussions were of unusual merit The remaining sessions of the sections were devoted to papers on widely diverse subjects, usually embodying original studies or original research, and of such general attraction as to hold the members in attendance till the time for final adjournment Since the organization of these sections this society has been singularly free from wire pulling and disagreeable episodes There are several reasons for this delightful change from former days 1, there is nearly four times the amount of work called for, which engages at least four times as many physicians This employs the surplus energy so that less is left for less useful purposes, 2, there are four times as many officers, so that the desire for office-holding is more largely appeased, and hence the diminished struggle for such positions, 3, an atmosphere of scientific study and work is created, of far greater intensity, and this represses much that is undesirable which was associated with the old style medical convention, 4, engaged in actual work constantly to a number threefold more than formerly, the members have found a pleasure and satisfaction hitherto unknown, 5, each member had a chance to select one of three papers or discussions at any time during the meetings—so that he had an opportunity to select topics hitherto unavailable, 6, the papers have become more scientific, and are prepared with greater care, because the selected audience has a chance to criticise more intelligently, and by its very selectness is better able to criticise

It must be admitted that this new state of things is unsatisfactory to the friends of the old time medical convention These prefer a chance to talk to a large crowd, to have a less discriminating audience, to shut off others from a chance to learn the art of public speaking in medical societies—they do not enjoy the highest grade of scientific work However, it is hoped by the majority of thoughtful workers in the Michigan medical profession that the present system may be continued and perfected

Mt Clemens was selected as the next place of meeting, and the first Thursday in June, 1896, as the date for holding the same

THE INDEX MEDICUS

The following notice from Mr George S Davis will be received by the entire profession with great regret No one, however, can criticise Mr Davis for declining any longer to make good the large discrepancy between the expenditures and the receipts

In our opinion the Association can afford to print this work as soon as the subscription list of the Journal shall reach 12,000 With a subscription list of that number, including members of the Association, the increase of advertising would pay for the loss in the issue of the *Index Medicus* It seen entirely clear that no private publisher will be wil ing to stand the loss, and as the work is universall conceded to be of the greatest utility to medic writers and teachers, it would seem eminently fittin that our great Association should carry it on Bu with the depleted revenue that we must probabl face this year, on account of the necessary elimin tion of certain advertisements, such increased e penditure would be impossible unless every memb puts forth his efforts to bring up the subscriptio We have not found canvassers of much benefi Most doctors are too busy to talk to them, and naturally results that the only real growth of th power and influence of the Association will be mad when the members, each for himself, resolves tha the old Association shall be the greatest on th globe, and secures a new member or subscriber fo the Journal

The new volume begins July 1 Let every memb obtain one new member or subscriber to start th new volume on a better and higher plane than eve With the consent of the editors of the *Index*, and th vote of the Association at its next meeting, not onl may the *Index Medicus* be preserved, but the Association itself, ever foremost in work for the advance ment of our profession, may still further promote it noble aims and purposes

THE PASSING OF THE INDEX MEDICUS

"Detroit, Mich, June 7, 1895

Dear Doctor —I notify you, as a subscriber, that th *Index Medicus* terminated its existence under m supervision, with the April number I have pu lished this journal since January, 1885, at an annu loss of from $500 to $1000, in view of my interest in purely scientific publication, in which I had no me cenary interest whatever This is a larger sum tha has been contributed by any professional man, o body of professional men to this purpose

Owing to the hard times of 1893 the subscriptio list of this journal was greatly shrunken, and diff culty was found in making collections from subscri ers The deficit in 1893 was a very material sun which was largely increased in 1894 Announceme was then made to the medical profession that unles the subscription list of the journal could be place upon a paying basis I must discontinue its public tion Many friends of the *Index Medicus* appealed t me to defer action until they could by individu and organized effort arrange for an increased num ber of subscriptions, or for a fund whereby its con tinuance might be assured After a period of si months it is found that the prospective deficit th year, assuming that all subscriptions are collectibl will be nearly $2,000 Inasmuch as I can not affor to carry such a burden I have decided as abov announced

Very sincerely yours,
(Signed) Geo S Davis"

PAN-AMERICAN MEDICAL CONGRESS

President Diaz in his annual message to th Mexican Congress, April 1, 1895, says

"The Executive being determined to omit no effort or spare no expense which might redound to the honor of the Nation and to the advantage of studious youth, has created an Anatomic pathologic Museum, with the double purpose of furnishing a new and efficient element of instruction to the school of medicine and also for the purpose of appreciating worthily the scientific labors that are to be presented to the Second Pan American Medical Congress when it meets in this Capital in 1897.

CORRESPONDENCE

"Audi Alteram Partem."

San Francisco, Cal., May [illegible], 1895.

To the Editor:—[Our esteemed correspondent whose letter pronouncing the collective investigation of the antitoxin treatment of diphtheria impossible of execution was published in the Journal of May 11, takes exception to the summary fashion in which his first communication was treated and furnishes the following argument in support of his belief that the results of such investigation must be valueless.]

I feel perfectly safe in saying that in the present light of science, no living person can make a positive differential diagnosis between typical Bretonnean diphtheria and allied affections—and for the following reasons:

1. A schizomycete answering Löffler's description has been found in less than 70 per cent. of cases of clinical diphtheria—and then never alone, always together with other forms, such as streptococci, staphylococci, pneumococci, bact. coli communis and micrococcus prodigiosus (See Hausemann, Benda, Ritter, Körte and others, Proceedings Berlin Medical Society, Nov. 28, Dec. 7, 12, 1894; also report of New York Board of Health on the bacteriologic investigation of 6,511 cases of clinical diphtheria between May 4, 1893, and May 4, 1894).

2. This virulent bacillus has been found in the mouth and throat of perfectly healthy children, and nurses in diphtheria wards. Also in connection with cases of rhinitis fibrinosa running the same clinical course as other cases in which it was absent (Benda, Liebreich, Hausemann, Ritter, Unger and others. Proceedings Berlin Medical Society, Nov. 28, Dec. 7, 12, 1894).

3. The disease produced in the lower animals by injections of so called pure cultures of Löffler's bacillus diphthericus, differs radically from typical Bretannean diphtheria in human beings (Hausemann, Ritter, Benda, Scheineman, Unger, Scholz and others. Proceedings Berlin Medical Society, 28, Dec. 7, 12, 1894).

4. Ritter found bacilli absent in a case of typical Bretannean diphtheria.

5. Polymorphism of schizomycetes, such as the bact. coli communis and others common to the alimentary canal of human beings and the lower animals—and constantly found within the internal organs of diseased organic forms before and immediately after death—render a scientific bacteriologic diagnosis impossible. (See reports on the following poison epidemics: 1, at Frankenhausen, investigated by Professor Gartner; 2, at Rörsdorf, investigated by Gaffky and Paak; 3, at Moorsule, investigated by Van Ermengen; 4, at Cotta, investigated by Nulsen, Zohne and Gartner; 5, at Ganstad Insane Asylum, investigated by Peter F. Holst. Also Wurtz and Hermann Macaigne, Welch of Baltimore, Lubarsale Tavel, Roux, Escherick, Fraenkel, Dunbar, Rodet, Stocklin, Cohn, Lankester, Billroth and others. Duclaux writes in *l'Annales de l'Institut Pasteur*, 1894, page [illegible]): *"Chaque année de* [illegible] *distinctes et* [illegible]. ("Each year's labor removes us farther from the hope of distinguishing and separating from one another forms thought to have been identified.")

Serum therapy is entirely "empirical," inasmuch as leading investigators in this field differ widely in regard to the [illegible] of "immunity" [illegible] in connection with organic forms having passed through so-called [illegible] diseases, and it can not be said that any of the [illegible] which may be enumerated [illegible] the test of severe adverse criticism. [illegible] "Chemotaxis" [illegible] cytosis theory, [illegible] Buchner and Hankin's alexin theory, [illegible] Koch-Behring antitoxin [illegible]. All these theories are stubbornly adhered to by [illegible] originators.

Antitoxin serum therapy [illegible] violent opposition offered by Koch and his disciples to Metchnikoff's phagocytosis [illegible] pathologic processes [illegible] Virchow's [illegible] and while many things point to [illegible] there exist no scientific demonstration of any theory, and any therapeutic method based thereon is unscientific and empirical as it were. For an exhaustive [illegible] on the various theories, experiments and data leading up to the introduction of antitoxin blood serum into human therapeutics see my paper "The Status Praesens of Antitoxin Blood Serum," read before the State Medical Society of California, April 16, 1895.

For reasons too obvious to mention antitoxin diphtheria serum has been more thoroughly tested in Berlin where it originated than elsewhere, and inasmuch as leading unbiased Berlin physicians have tested its merits during the past five years and expressed their views thereon professionally, we are in a position to judge correctly of the matter.

In the Berlin Medical Society Nov. 28 and Dec. 7 and 12, 1894, Hausemann, Ritter, Benda, Unger, Scholz, Liebreich, Oppenheim, Hahn, Meyer, Gottstein and others went on record as saying that, "antitoxin diphtheria serum did neither render immune nor cure diphtheria as claimed by Behring but that it complicated said disease by giving rise to serious inflammations of important functionating organs such as the liver, spleen, heart, kidneys, nervous system and skin—the direct result of chemic decomposition of the blood."

Nor does the following mortality statistics, appertaining to Berlin, compiled by Gottstein from the official death register of the city, show the serum therapy up in a very favorable light when studied attentively and without bias:

From September 30 to November 24.

Years	1890	1891	1892	1893	1894
Deaths in entire Berlin	270	216	259	[illegible]	200
Death in hospitals	171	121	178	107	131
Admitted to hospitals	[illegible]	320	[illegible]	[illegible]	712
Per cent	[illegible]	[illegible]	[illegible]	41.3	18.4

For the entire year.

Year	1890	1891	1192	1893	1894
Deaths in entire Berlin	[illegible]	[illegible]	1,412	[illegible]	1,281
Deaths in hospitals	682	618	857	[illegible]	[illegible]

For reasons too obvious to mention, hospital mortality is much less than that of private practice—hence we can readily understand why the mortality from Sept. 30 to Nov. 24, 1894, appears to be reduced to half of that of a corresponding period in 1891, because for some reason, probable panic attendant upon serum notoriety, 712 patients were admitted to the hospitals in 1894 against 320 in 1891. To what extent these 712 hospital cases have been manipulated by the friends of the serum can best be seen by referring to the last columns of these statistics which show that the mortality from diphtheria for entire Berlin during 1894 up to November 24 far exceeds that of the entire year of

1891—in spite of the fact that over 1,000 children were treated by the serum method in the hospitals, beside numerous cases in private practice Adding the number of deaths that occurred between November 24 and January 1, the mortality of Berlin from diphtheria in 1894 exceeded that of the year 1891 by about 600, or over 25 per cent

Rumpf, of Hamburg, states that better results are obtained in the hospitals there by other methods

Virchow and Baginsky have expressed themselves in favor of the serum-therapy, but inasmuch as the opinion of the former is based upon certain results said to have been obtained by his assistants during a few weeks in the summer of 1894, while he was absent on his vacation—and inasmuch as the latter entirely ignores and defies mortality statistics—their opinions upon this subject can be of little or no value (See Proc Berlin Medical Society, Nov 28, Dec 7, 12, 1894)

I will exclude all data coming from Behring, Aronson and others personally interested in the manufacture and sale of antitoxin serum As a rule, medical men in Europe are very conservative regarding this new therapy—as they have not yet recovered from the humiliating effects of the "tuberculin swindle," which originated in the same quarters

So far, nothing has appeared in the American medical press which would indicate that medical men in this country are familiar with the cardinal principles underlying this *subject—and I would advise them to "look before they leap,"* as perhaps neither "they" nor the "American public" are ready to accept these principles when fully understood

These principles were exposed by Binz in 1883 at the Buda-Pesth Congress for Internal Medicine, when he said "Our future therapeutic efforts in infectious diseases must be toward '*Den lebenden organisms zu entgiften*'" (To poison the organism, as it were)

I take issue with Binz and his followers on this doctrine, and I believe that the majority of the American medical profession will continue in the future as they have done in the past—to eliminate the contagium at the bedside '*Den lebenden organisms nicht zu entgiften wollen*" Respectfully,

CHAS G KUHLMAN, M D

Answer to Dr Rogers

NEW YORK, June 10, 1895

To the Editor —Dr Rogers' attack upon Koch's demonstration of the causation of cholera, in the JOURNAL of June 8, is rather amusing to the medical man of to day While believing that he will receive answers more able than mine, I take the liberty of calling his attention to a few errors in his statement

In the first place, Koch did not "fancy" that the comma bacillus was the cause of cholera, it had to be present in every case of cholera, it had to be capable of cultivation in artificial media in pure culture, and it had to produce the disease whenever inoculated, before he was willing to identify it as the cause Unfortunately, the inoculation experiments do not depend alone upon results obtained in the lower animals, for several bacteriologists have themselves been infected while working with this organism

In the second place, while comma-shaped organisms are universal, as the Doctor states, the comma bacillus of Koch is neither universal nor harmless If the shape of microorganisms alone were sufficient to differentiate them, what a simple easy study would be the science of bacteriology! Dr Koch has never asserted, to my knowledge, that the cholera bacillus is frequently present in water from all sources, although any up-to date physician knows that curved bacilli are frequently present All cholera germs are curved bacilli, but all curved bacilli are not cholera germs

The experiments of Drs Pettenkofer and Emmerich, as alluded to in the letter, prove nothing, for the following (and other) reasons

1 Koch and many other observers have shown that acids readily kill this organism , we can easily understand, therefore, how the healthy acid gastric juice of the two physicians protected them from infection Drinking cholera broth does not necessarily imply infection , it only makes infection possible The liquid stools mentioned can be produced by toxins isolated from old cultures, without any bacilli being present

2 Organisms grown on artificial media for many generations are very apt to lose their virulence, even though they may have been very virulent in the first few cultures

In conclusion, I would hardly advise Dr Rogers to repeat the experiments of Pettenkofer and Emmerich, as such a communication as he has given us, in defiance of modern scientific research, might indicate that his gastric juice had alkalin tendencies! Yours respectfully,

WALTER G HUDSON, M D

A Card from Secretary Atkinson

PHILADELPHIA, June 4, 1895

To the Editor —Your explanation of the inability to send the JOURNAL to the new members does me great injustice As I wrote you, not any of the credentials nor papers of the Registration Committee have yet reached me All were sent directly to Dr Newman, our Treasurer Had I had the list or my own private index, made especially to prevent this, I would have had my share done at once For this reason, I ask you to do me the justice to announce in the JOURNAL the fact that all the papers were sent at once to Chicago I am getting letters on this subject constantly, and it is important that I should be set right before the profession Please do me this favor at once

Yours very truly,

WM B ATKINSON

Literature on the Dual Brain

ST LOUIS, June 4, 1895

To the Editor —I have read with interest your editorial on the "Dual Brain," in a recent number of the JOURNAL Please inform me how I can procure Dr Bruce's article on this subject, also the writings of Holland and Wigand, and Brown-Séquard FAYETTE C EWING, M D

ANSWER —Dr Wigand, "Duality of Mind," *Lancet*, 1844 , Sir Henry Holland, "Chapters on Physiology of Mind," 1852, Brown-Séquard, Toner Lecture, 1877 , L C Bruce's article in *Brain*, Spring No , 1895

Exact Address of Association Treasurer

CORONADO, CAL , June 1, 1895

To the Editor —Will you please insert in our JOURNAL the exact place of residence of the Treasurer of the ASSOCIATION, that members may know just where to send dues

F W TODD, M D

ANSWER —Henry P Newman, M D , 36 Washington Street, Chicago, Ill

SOCIETY NEWS

American Academy of Railway Surgeons, Meeting of the Publication Committee —Pursuant to the call of the President, Dr C K Cole, Helena, Mont , Drs C B Kibler, Corry, Pa , W J Galbraith, Omaha, Neb , R Harvey Reed, Columbus, Ohio , C M Daniels, Buffalo, N Y , and Webb J Kelly, Galion, Ohio, met June 1, at Galion, Ohio, to arrange the preliminary work for the coming session of the American Academy of Railway Surgeons After considerable discussion, the date of the meeting was set for September 25, 26, and 27 This was thought advisable on account of the previous date conflicting with those of other prominent associations, and again on account of the excessive heat at that season of the year It was decided to request Chairman Bevan of the Arrangement Committee to engage headquarters and hotel accommodations at one of the leading hotels in Chicago The classification of the program was placed in the hands of Drs Kelly and Reed they to act in conjunction with Drs Owens and Bevan In the wisdom of the committee it was deemed advisable to have an eminent authority deliver an address upon Medico Legal Surgery, and Dr Daniels was chosen to select a man for this position Arrangements will be made for the reading and discussion of eight papers before the Academy each day Each paper will be limited to twenty minutes, and the opening discussion to ten minutes Each subsequent speaker will be allowed five minutes in which to discuss any paper read A vast amount of routine work was done by the committee and we have their assurance that the program will be one of the best ever sent out from any surgical association in this country

American Laryngological Association —The seventeenth annual congress of this Association will be held in Rochester N Y June 17, 18 and 19 1895 The following papers will be read Foreign Bodies in the Esophagus by Harrison Allen, Desiccated Thyroids in Goitre by E Fletcher Ingals The Influence of Chronic Diseases of the Throat upon certain Defects of Speech, by D Bryson Delavan Electrolysis by a Current Controller for the Reduction of Spurs of the Nasal Septum by W E Casselberry, Is Acute Tonsillitis in any way dependent upon the Rheumatic Diathesis by Geo B Hope, Some Remarks on Removal of the Tonsils—A Case of Lipoma of the Larynx by J W Farlow A Case of Melancholia Cured by Intranasal Operation—Case of Suppurative Ethmoid Disease followed by Invasion of the Sphenoidal Sinus Abscess of the Brain and Death by F H Bosworth Consideration of some of the more important Principles of Intranasal Surgery, by W K Simpson Ludwig's Angina J E Newcomb

Discussion Tuberculosis of the upper Air Passages Etiology—Jonathan Wright, Diagnosis—C C Rice, Treatment—E L Shurly and J W Gleitsmann

Cyst of the Maxillary Sinus by Chas H Knight, A Case of Abscess of the Frontal, Ethmoidal and Maxillary Sinuses by J H Bryan, *a* Necrosis of the Middle Turbinate, *b* Congenital Osseous Stenosis of the Naris by A B Thrasher, *a* A Naso pharyngeal Cyst, *b*, An Oro pharyngeal Cyst, *c*, Fibroma Papillare, or True Papilloma of Nasal Septum, by Jonathan Wright

Discussion The Relation of Vasomotor Disturbances to Diseases of the upper Air tract by F H Bosworth W H Daly and J N Mackenzie

Electro Therapeutic Association.—The following circular has been sent to the manufacturers of electro therapeutic apparatus by the committee of the American Electro-Therapeutic Association, which will meet in Toronto, Sept 3 1895

TORONTO, May 1, 1895

Dear Sir —The Committee of our Association has been directed to write you, along with the other manufacturers of electrical apparatus, to engage your coöperation in securing the general adoption of

I Uniform connections and interchangeable electrodes 1, universal rheophore tip, 2, universal aperture for same, 3, universal attachment for electrolysis needles, etc

II Standard gauge of screw throughout construction, should screws be required

N B —The adoption of a "society screw" for microscopes has been of mutual advantage to the makers of these instruments and their customers It has led to increased sale, while it has also facilitated repair The same advantages would follow the adoption of the above recommendation

The committee was also instructed to request manufacturers to submit to it the various forms of electrodes now on the market, to test the same, and to report at the meeting of the society to be held in Toronto during September, 1895 Will you also kindly send the usual circulars, describing the special advantages of your instruments, which may be forwarded to the following members of the Committee

Gynecologic Electrodes, Dr Lucy Hall Brown, 158 Montague Street, Brooklyn, N Y

Neurologic Electrodes, Dr C Eugene Riggs, the Endicott Arcade Building, St Paul, Minn

Surgical Electrodes and others not specified, with samples of rheophores, rheophore tips, sockets and other connections, Dr Charles R Dickson [illegible] Bloor Street East Toronto Canada

Trusting to hear from you at your earliest convenience,

I am yours truly,

CHARLES [illegible] Chairman

PUBLIC HEALTH

Goitre in the High Alps —Leon Jacques is of opinion that endemic goitre is an infectious disease the germ of which is not yet isolated but which exists in the water and air and fruits of the infected area The inhabitants are predisposed by certain secondary influences—poor water, vitiated air, unhealthy dwellings poor food and above all else as a determining cause, the influence of extreme temperatures, that is excessive cold and heat acting alternately Removal of these causes will nearly exterminate the disease and the author demands the establishment of cisterns in the infected villages the construction of roads and better homes and the suppression of marriages between goitrous subjects In its incipiency goitre is best combated by iodine at a more advanced stage it is amenable to surgical measures[1]

Psittacosis or Infection Spread by Parrots —In a recent brochure Morange states that psittacosis constitutes a definite morbid entity, one in its nature and causes and its cases always comparable to each other It may occur epidemically (1892) or even as an endemic (1887 November 1893) The bacteriology of psittacosis is obscure yet but it is highly probable that it is a primitive infection by a special bacterium found by Professor Nocard in the marrow of a parrot's humerus Secondary infection by the pneumococcus is common A resume of the clinical history shows profound infection of the economy, characterized by languor and intense prostration with terminal pneumonia As to diagnosis, when confronted with a poorly defined typhoid condition not exactly agreeing with the other known typhoid states M Morange says we should always ascertain if the patient has been exposed to or in contact with a sick parrot Prophylaxis of the disease should include buccal antisepsis and isolation of the patient and interdiction of the sale of parrots by street vendors who are generally vagrants and consequently irresponsible

Health Reports —Received at the office of the Supervising Surgeon General, M H S

SMALLPOX—FOREIGN

Bohemia Prague, April 27 to May 18, 11 cases

Belgium Brussels, May 11 to 18, 1 death

Havana Cuba, May 24 to 30 11 deaths

Egypt Cairo, April 30 to May 6, 2 deaths

England Liverpool, May 11 to 25, 1 case 1 death, London, May 11 to 25, 11 cases, Manchester, May 11 to 25, 1 case, Southampton, May 18 to 25 1 case

France Paris, May 11 to 18 1 case

Ireland Dublin May 11 to 25 10 cases

Holland Rotterdam, May 18 to 25, 2 cases

Russia Moscow, May 4 to 11 2 cases, 1 death, Odessa May 11 to 18, 9 cases, 3 deaths, Warsaw, April 27 to May 4, 1 death St Petersburg, May 11 to 18 4 cases 9 deaths

Scotland Edinburgh, May 11 to 25 1 case, Glasgow, May 11 to 18, 1 death

Spain Barcelona, month of March, 6 deaths, Madrid, May 12 to 19, 2 deaths

SMALLPOX—UNITED STATES

Kentucky Louisville, May 1 to 31, 1 death

Louisiana New Orleans, May 11 to 25, 8 deaths

Michigan Olivet, May 20, 1 case

Ohio Cincinnati, June 1 to 7, 2 deaths, Cleveland, May 24 to June 1, 4 cases, Toledo, May 1 to 31, 2 deaths

Pennsylvania Philadelphia, May 24 to June 1, 6 cases, 1 death

Missouri St Louis, May 24 to June 1, 10 cases

Wisconsin Milwaukee, May 1 to 31, 19 cases, 1 death—June 1 to 8, 1 case

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[1] These de Lyon 1891

[2] La Psittacose, Paris, 1895

CHOLERA

Japan: Hiogo, May 4 to 11, 2 cases, 1 death.
Russia: Volhynia, April 7 to 13, 57 cases, 18 deaths; Podolia, April 14 to 20, 5 cases, 4 deaths.
Arabia: Mecca, April 22 to May 6, 213 deaths.

YELLOW FEVER

Cuba: Havana, May 23 to 30, 10 cases, 4 deaths.
Mexico: Vera Cruz, May 23 to 30, 4 deaths.

MISCELLANY

For the Prevention of Blindness.—The Illinois Legislature has passed the bill for the prevention of blindness.

Serious Accident.—The friends of Dr. Chas. Denison, of Denver, will regret to learn of a painful accident to that gentleman, by which his leg was broken.

Estimate too Low.—Our estimate of 300 new members was too low. There were 350 new members at the Baltimore meeting. Let the good work go on!

Addresses Wanted.—Will some one please give the exact address of Drs. T. M. Floyd and J. H. DeHart? These names were returned as those of new members, but we have not been able to ascertain their direct address.

Washington State Board of Medical Examiners.—The Governor of Washington has appointed the following physicians to fill the vacancies on the State Board of Medical Examiners of that State, viz.: Dr. C. A. Smith, of Seattle; Dr. Henry W. Dewey, of Tacoma; and Dr. E. P. Penfield, of Spokane.

To Cleanse Nickel Instruments.—The blue or gray oxidation which covers nickel instruments may be removed by washing them in alcohol with sulphuric acid, in the proportion of 1 part of the latter to 50 of the former. The pieces are plunged in the bath for a few seconds, then rinsed in clear water and pure alcohol and dried in sawdust.[1]

Personal Notes.—Dr. A. H. Doty, Health Officer of the Port of New York, has recently set sail for Tampa, *en route* for Havana for the purpose of studying on the ground the Cuban management of yellow fever, to be absent two weeks. It is reported that he has said that a more serious epidemic of the fever may logically be expected by reason of the large number of unacclimated Spanish soldiers lately brought over from the mother country.

Donations to Medical and Charitable Objects.—Under the will of Mrs. Clarissa L. Crane of New York City, the Society for the Relief of the Ruptured and Crippled will receive $1,000. An equal sum is donated to the Skin and Cancer Hospital, the Fordham Home for Incurables, the Institution for the Blind and the Children's Aid Society. About $50,000 more have been bequeathed to other charitable objects in New York, Connecticut and Massachusetts.

Value of Albuminuria as a Symptom.—Marion insists on the fact that in renal affections the noxious matters passed in the urine are not so important as those which are retained in the organism; and in support of his views cites five cases; three of these had no albumin in the urine, nevertheless, the kidneys were working very badly and the patients were in very grave condition. As to the others, one passed eighteen grains and the other forty-eight grains daily of albumin, yet they only presented a few slight symptoms of Bright's disease.[2]

The Seattle General Hospital, of Seattle, Washington, will be opened for the reception of patients on June 15. The building has been thoroughly repaired and a modern operating room put in. The Board of Governors have announced the appointment of the following staff, viz.: Diseases of Eye, Ear, Nose and Throat, Dr. A. B. Kibbe; Neurologist, Dr. C. W. Sharples; Gynecologists, Dr. L. R. Dawson and Dr. Belle H. Smith; Diseases of Children, Dr. G. B. McCullough; Surgeons, Dr. James B. Eagleson and Dr. Alfred Raymond; Physicians, Dr. C. A. Smith and Dr. George Newlands; "Homeopathists," Dr. F. A. Churchill and Dr. Sarah Kendal.

How to Treat Loquacity.—Doctor (to fair patient): Put out your tongue (meanwhile he writes a prescription). There, that will do.

Miss Chatterbox: But, Doctor, you did not even look at my tongue.

Doctor: No, I only wanted you to keep quiet while I wrote the prescription.—*Geillustreed Stuiversblatt.*

On a Tour of Inspection.—President R. Beverly Cole has been on a tour of inspection since the Baltimore meeting. The State of California having granted an appropriation to maintain the Medical Department of the State University, a commission of which Professor Cole is the chairman was appointed to visit medical colleges, for the purpose of ascertaining the method of construction of the new laboratories, noting the best models and securing working plans. He is assisted by Professor Becker of the Pharmacy Department of the University, and Mr. Sutton the architect. The indisposition of the chairman prevented him from visiting as many of the newer college buildings as he had contemplated, but he regards his mission as highly satisfactory. He left Chicago for California June 10.

Appendicitis Following Curetting, Difficult Diagnosis.—Monod reports a case in which curetting of the uterus was performed on October 5. In the night of October 9 to 10, violent pain occurred in the iliac fossa; on the 11th the face was drawn, pulse full, 100, vomiting of mucus, hiccough, right side of abdomen tender, evening temperature 39.5 degrees C. On the 13th the condition was grave; meteorism, abdomen tender on pressure, especially about the colon; vaginal examination negative. Diagnosis: appendicitis with peritoneal reaction. On the 14th there was a bowel movement containing old grape skins. From this time the symptoms gradually subsided. The case is interesting from a diagnostic standpoint. One might at first suspect some untoward effects from the curetting, but the sudden invasion precluded the idea of septic peritonitis, the lapse of time excluded perforation of the uterus, the negative examination eliminated perimetritis or parametritis, there was no trace of strangulated hernia, and the mucus vomiting and the temperature excluded internal obstruction. The localization in the iliac fossa suggested appendicitis, but which variety? From the symptoms there is little reason to suspect perforation with acute peritonitis, though a perforation may exist with localized peritonitis and adhesion. Conclusion: appendicitis without general peritonitis. But was there a peri-cecal abscess? The meteorism and contraction of the abdominal wall precluded any exploration; nevertheless, surgical intervention would be premature before local signs of suppuration appear; it is indicated, if there is no remission within two to five days (Roux, Jalaguier). In this case there was remission on the fifth day. The author is in favor of "armed expectancy," while using large quantities of opium, ice, enforcing absolute rest and a severely restricted diet.[1]

Scopolamin as a Mydriatic.—Grossman has tried scopolamin for a year as a mydriatic. A 2 per cent. solution causes mydriasis in eight to ten minutes; the maximum effect is attained in fifteen to twenty minutes and the pupil regains its normal size in four to six days. A 1 to 200 solution of atropin takes twenty minutes to dilate the pupil, fifty to sixty minutes for the full effect and seven to ten days for the pupil to become normal. Paralysis of accommodation follows instillations of atropin in fifty to sixty minutes, in scopolamin in thirty to thirty five minutes, but with the latter it does not last so long. If the instillation of scopolamin is preceded three or four minutes by one of cocain, the mydriatic action is more pronounced; cocain and atropin combined are less energetic. A 1 per cent. solution of scopolamin used two or three times daily for months never causes any untoward effects; toxic effects are only produced when a 3 or 4 per cent. solution is used. Atropin, on the other hand, in a 1 per cent. solution employed for any length of time and sometimes after only two or three instillations produces very manifest phenomena of intoxication. The author recommends that scopolamin replace atropin in children and adults with cardiac affections, for a 1 per cent. solution causes no phenomena of intoxication, does not irritate the cerebral cortex or accelerate the heart's action. Grossmann also prefers scopolamin to atropin and homatropin whenever mydriasis is to be produced for diagnostic purposes, the advantages of the former are its much greater rapidity of action and the lesser increase of intra ocular tension.[1]

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[1] Les Nouveaux Remedes, April 24, 1895.
[2] Arch. Gen. de Med., March, 1895.

[1] Gaz. Med. Sci. de Bordeaux, March 17, 1895.

Analgesic Action of Bicarbonate of Soda in Digestive Disorders.—Linossier claims that a diagnosis of hyper acid dyspepsia, made by the fact that bicarbonate of soda relieves the distress after eating, is entirely erroneous. He asserts that this agent may afford relief in other conditions than hyper acidity and gives the following as his opinions: 1. If a gastric crisis following a few hours after meals is relieved by large doses of bicarbonate of soda, it does not follow that the distress is due to hyper acidity. 2. The analgesic action of this drug may be used in most cases of gastric crises occurring regularly some hours after meals even when the train of symptoms or gastric analysis eliminates the possibility of excess of hydrochloric acid. The drug is best given just before the usual mealtime in doses of 0.50 to 2 gr. and may be repeated if the sedative action is only short lived. The same rules are to be followed as in the treatment of cases due to hyper acidity, save that the dose is less, though there need be no hesitancy in increasing it if the calmative effect is not produced. It will be found advantageous in most cases to dissolve the salt in very warm water, the excitomotor action of the water accentuating the effects of the salt. The author insists on the fact that the cases amenable to the soda are those recurring periodically toward the end of digestion. The latest cases are, in general, the ones most easily cured. Those occurring immediately after meals or that are continuous are not relieved as a rule. Among the digestive disorders produced some time after meals may be mentioned the insomnia of dyspeptics. In many cases radical relief is obtained by the ingestion of 4 to 8 grams of the bicarbonate four to five hours after the last meal, as M. Glenard has already remarked. In some patients, unfortunately, the salt rapidly loses its effect and though the doses are quickly increased it is only efficacious for a few days. In others again, it can be used indefinitely with good results.[2]

Two Cases of Cancer Treated by Sero therapy.—At a recent séance of the Paris Academy of Sciences, MM. Richet and Hericourt reported the treatment of two cases of cancer by serum. They used an osteo sarcoma of the leg, which was pounded up and a little water added. The liquor was filtered through a cloth and injected into a donkey and two dogs. No reaction followed, and five, seven and fifteen days later the animals were bled in order to collect the serum. The first case in Professor Terrier's ward was a woman who was operated on in October, 1895, for a tumor the size of an orange, dating back eight months and involving the sixth, seventh, and eighth ribs—skin not involved. In February, 1895, the tumor had re appeared and attained the size of a small nut, a month later it was the size of a small orange. Treatment by sero therapy was begun March 12, injections of 8 cc. each of the serum being made in the cellular tissue around the tumor for forty days—the total amount injected being 120 cc. From March 2[illegible] the tumor manifestly diminished and this became more evident until at present there is to be found only an induration the limits of which are difficult to define, and the volume is not one third that of the primitive tumor. Moreover the general condition of the patient is much improved and she has gained much flesh. The second case, in the service of Professor Tillaux, is that of a man [illegible] years of age, who entered the service on March 7, presenting a tumor in the inferior epigastric region the size of a large orange and which was diagnosed as cancer of the stomach. Surgical interference being deemed out of the question, sero therapy was begun April [illegible] by a preliminary injection of [illegible] cc. of serum and up to April 24 a total of [illegible] cc. had been injected. Improvement in the general condition rapidly followed. The patient's weight, [illegible] kilos on April 10, had increased to [illegible] on the 16th and to [illegible] on the 23d. The tumor rapidly diminished in volume from April 10, so that by April [illegible] it could be no longer isolated and at present there is only the sensation of a deep seated doughiness, very vague and difficult to outline. One cannot but remark that the recovery in the latter case was so rapid that it would be prudent to look upon it as an error in diagnosis.[1]

Intra cranial Hematoma with Collateral Paralysis.—At the last session of the German Surgical Congress, Ledderhose, of Strasburg, said that the rarity of cases of intra cranial hemorrhage with collateral paralysis—that is to say paralysis situated on the same side as the hemorrhage—justifies him in relating a case of his own. A man of [illegible] was struck down during a quarrel and was kicked in the head. After a momentary loss of consciousness he recovered and got up. A few days later symptoms of cerebral compression slowly appeared. In nine days he was confined to his bed and Ledderhose was called in three days later. The author found the patient comatose with paralysis of the right half of the body, diagnosed intra cranial hemorrhage from laceration of the middle meningeal artery on the left, though there were no signs of fracture. At the operation no hemorrhage was found and the patient died the next day. The necropsy showed the absence of any fracture of the cranium or of laceration of the middle meningeal arteries; on the right side corresponding to the paralysis there was an enormous hematoma inside the dura mater covering the middle and posterior part of the right hemisphere. After searching the literature Ledderhose has been able to find but thirteen cases on record of collateral paralysis following either traumatism of the cranium or pathologic lesions. Brown Séquard was the first to call attention to these facts. The researches of other observers, especially Pierret, have shown that there often exist considerable differences in the decussation of the fibers from the cerebral hemispheres. The crossing may be entirely absent, which would explain the possibility of collateral paralysis. Such cases will prove a source of great embarrassment to the surgeon. Diagnosis of this condition is generally impossible; sometimes edematous swelling of the pupil on the paralyzed side may lead to suspicion of the anomaly. Whenever the surgeon fails to discover any hemorrhage on the side trephined he is perfectly justified in making another opening on the other side.

Communications Made to Dentists are not Privileged.—The point was recently made in a Michigan case that a statute providing that "no person duly authorized to practice medicine or surgery shall be allowed to disclose any information which he may have acquired in attending any patient in his professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon," applies to dentists. But the Supreme Court of the State holds otherwise (People v. De France, decided April 2, 1895). At the common law, explains the court, information gained by a physician or surgeon while in attendance upon his patient was not privileged. The purpose of this statute was to throw around such disclosures as the patient is bound to make for the information of his attending physician the cloak of secrecy, and the prime object of the act was to invite confidence in respect to ailments of a secret nature, and the spirit of the act would not include a case where the infirmity was apparent to every one on inspection In practice, however, the statute has not been so limited in construction, for the reason that the words of the act are broad enough to include any information necessary to enable the physician to prescribe or the surgeon to act Nevertheless, the purpose of the act is to be considered in determining whether a dentist is intended to be included within its terms Certainly the terms "dentist," and "surgeon," are not interchangeable, and if a dentist is to be held to be a surgeon, within the meaning of this act, it must be because his business as a dentist is a branch of surgery It is apparent, however, that the act relates to general practitioners, and to those whose business comes within the definition of "physician" or "surgeon" A dentist is one whose profession it is to clean and extract teeth, repair them when diseased, and replace them, when necessary, by artificial ones For these reasons, the court holds that a dentist is not within the terms or the spirit of the act

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[1] Les Nouveaux Remedes, April 21, 1895.

[2] Jour. de Med. et Chir. Prat., 1895, No. 8.

[1] L'Union Medicale, May 4, 1895.

[2] La Semaine Medicale, April 21, 1895.

Gold Preferred to Silver—According to the San Francisco *Post*, silver even in the form of the nitrate salt is not in favor on the Pacific slope The *Post* says A young lady with a touch of tonsillitis was consulting the family physician

"That is nothing serious," said he "I'll touch it up with a little nitrate of silver and you will be all right"

The young lady looked a bit doubtful

"Oh, it won't hurt," remarked the doctor, reassuringly

"I wasn't thinking of that Papa might object"

"Why, what possible objection can he have?"

"I heard him tell mamma the other evening that he was opposed to silver Couldn't you use nitrate of gold? Silver is so common and cheap, you know, and I am sure papa wouldn't object then"

Tuberculosis of the Biliary Passages—At a late séance of the Biological Society of Paris, M Sergent spoke upon the pathogeny of tuberculosis of the biliary passages which, he said, is still unknown Two hypotheses are suggested according to the first it occurs from without inward, according to the other from within out In the former case the peribiliary tubercle is analogous to the peribronchial nodule, in the latter, it acts as a genuine tuberculous angiocholitis, or perhaps an ascending biliary infection Sabourin is an adherent of the first hypothesis While this may explain those cases in which the peribiliary tubercles are so rare that we can not discern them in a given liver, it alone does not suffice for those cases in which the liver is riddled into cavities or with peribiliary tubercles In such cases, if the second hypothesis is not admitted, it must be supposed, in order to explain the facts by the other theory, that there is an acute or chronic inflammation of the bile passages, which serves as a *point d'appui* for the bacilli carried by the circulation In order to clear up these questions, Sergent undertook a series of experiments which may be grouped under three heads (*a*), inoculation of animals with tuberculous matter without wounding the bile passages in any way, (*b*), infection of the virus into the biliary ducts, with or without ligature of the ductus choledochus, (*c*), inoculation of animals and wounding the bile passages by aseptic or septic ligature of the choledochus The animals used were the guinea pig, rabbit and dog The author remarks that the last named is preferable, for it reacts marvellously to human tuberculosis and its bile passages are very easy to explore The choledochus was tied with absorbable catgut so as to produce only a temporary retention of bile In one series of experiments only one branch of the choledochus was tied, so as to have a hepatic lobe for control observations All inoculations were made with human virus A parallel series of experiments was also carried on to see if the tubercle bacillus was modified in its color, culture conditions or virulence by a prolonged sojourn in bile Sergent thinks the following conclusions are justified 1, the pathologic anatomy of biliary tuberculosis is that described by Sabourin and corroborated by the author in a dozen cases with serial sections, 2, the tubercle bacillus does not appear to undergo any modification of its usual characteristics by a prolonged stay in bile, 3, the peribiliary tubercles disseminated and rare, develop from without inward, these peribiliary nodules surround the biliary conduit, little by little, and end by ulcerating and emptying into the cavities, as is shown by examining animals inoculated through the veins without receiving any traumatism of the bile passages, 4, true tuberculosis of the bile passages (systematized form) may be reproduced experimentally by injecting tuberculous material into the ductus choledochus, in other words, tuberculous angiocholitis of an ascending biliary infection type may be experimentally reproduced[1]

Uses of Calcium Chlorid—In a clinical lecture on the uses of calcium chlorid, Dr George Parker, Assistant Physician to the Bristol General Hospital, attempts to define more clearly its important rôle in the work of the human body with a view to securing its further intelligent employment It is absorbed with singular ease without change and it produces certain definite and marked results It has three main therapeutic uses 1, as a hemostatic, 2, as a sedative to mucous membranes, and third, as a tissue builder in strumous diseases in place of the hypophosphites Indeed it has been affirmed that most calcium salts, except the lacto- and other acid phosphates are first converted into chlorids by the gastric juice Reference is made to the researches of Lehman, Roberts, Spanten, Kuchenmeister and others on its action in cystitis and chronic nephritis and to those of Germain See in gastric ulcer and dyspepsia Professor Wright's experiments on the clotting of oxalated blood *in vitro* under treatment with the calcium are detailed at length and Dr Parker has been led thereby to employ the salt in a number of cases where a temporary increase of coagulability was desired He has found that 3 or 4 drachms of the salt well diluted can be taken without inconvenience during the day and prefers the larger doses "For causing rapid clotting and cessation of hemorrhage I have found half-drachm or drachm doses act too well in many instances to incline me to use smaller ones Only once, in a case of obscure abdominal tumor out of many instances did I have any complaint of palpitation, and once a slight urinary irritation appeared to follow its administration It is, of course, difficult to say in a given case that the hemorrhage has ceased in consequence of the drug, but I have a phthisical patient with recurrent hemorrhages who, for the last three years, has taken it in drachm doses with considerable success—the only drawback being that the sputum is more difficult to expectorate, and I constantly employ the remedy for similar cases and for various forms of hemorrhages of minor severity in the outpatient room" In fine, as a hemostatic, as a gastric sedative and in the treatment of tubercular glands, the lecturer believes that the substance has established claims that warrant more attention than has of late years been given to it[2]

Can not Quarantine for Refusal to be Vaccinated.—Every local board of health in the State of New York is required by statute of 1893 to 'guard against the introduction of contagious and infectious diseases by the exercise of proper and vigilant medical inspection and control of all persons and things arriving in the municipality from infected places, or which from any cause are liable to communicate contagion. It shall require the isolation of all persons and things infected with or exposed to such disease, and provide suitable places for the treatment and care of sick persons who can not otherwise be provided for It shall provide at stated intervals a suitable supply of vaccine virus, and at all times provide thorough and safe vaccination for all persons in need of same" Furthermore, a provision in the charter of the city of Brooklyn is to the effect that in the presence of great and imminent peril to public health by reason of impending pestilence, it shall be the duty of the Health Commissioner "to take such measures for the preservation of the public health from such impending pestilence as he may in good faith declare the public safety and health to demand, and the Mayor of the said city and the President of the Medical Society of Kings County shall also approve, in writing" It would seem from a consideration of these provisions of law, says the Court of Appeals of

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[1] La Semaine Medicale, 1895, No 24

[2] The Clinical Journal, March 27, 1895

New York, in a decision rendered May 3, 1895 (*In re* Smith), that while responsibility and a wide authority have been conferred upon the Health Commissioner in the administration of his important office, nevertheless that the statute contemplates when persons or property are to be affected by the isolation mentioned, that the fact must exist either that they are infected with the contagious disease, or that they were exposed to it. It does not warrant the Commissioner taking the position that "wherever any person shall refuse to be vaccinated such person shall be immediately quarantined, and continued in quarantine until he consents to such vaccination." It is difficult to suppose that the Legislature would invest local officers with such arbitrary authority over their fellow citizens, and the language of an act would have to be very plain before the courts would be warranted in giving it such a construction. Here the Legislature has done nothing of the kind. The language is sufficient to confer the needed authority to do all acts which in his judgment, as approved by his associate in the matter, are necessary to be done to improve the sanitary condition of the city and to preserve the public health from being affected. That authority would undoubtedly be sufficient to deal summarily with cases where persons are stricken with a contagious or infectious disease, or have been actually exposed to it, and it is broad enough for every practical purpose in dealing with the facts of any case presented; but the authority is not given to direct or to carry out a quarantine of all persons who refuse to permit themselves to be vaccinated, and it can not be implied. The meaning of the particular language in the section is, and it should read, that the board of health shall "require the isolation of all persons and things infected with or who have been exposed to such diseases." The quarantine in this case, which it is held was not authorized, was of persons engaged in a general express business which was in part carried on through what has been "as was alleged, one of the worst infected centers of the city." Allegations that the business might include the carrying of articles which might come from infected centers, and that the persons conducting the business might be seized with smallpox, and if they were permitted to continue in their business without being vaccinated they might be the means of serious consequences to other citizens with whom they came in contact, the court says fall far short of stating facts upon which the Commissioner of Health would be authorized to take such drastic measures as to effect the imprisonment of citizens by quarantining them in their houses. This decision reverses one of the general term of the Supreme Court of New York, which reversed the special term in taking the position which is now affirmed by the highest tribunal of the State.

Society Notes

The annual meeting of the Hennepin County Medical Society was held in Minneapolis June 3.——A regular meeting of the Peoria City Medical Society was held June 4.——At the annual meeting of the New Hampshire Medical Society held in Manchester, the following officers were elected: President, E. F. McQuesten; Vice President, A. P. Richardson; Secretary, G. P. Conn.——At the annual meeting of Indiana State Medical Society the following officers were elected for the ensuing year: President, Miles F. Porter; Vice President, J. S. Jarkins; Secretary, J. C. Woodburn; Treasurer, J. O. Stillson. The next meeting of this society will be held in Ft. Wayne.——The annual meeting of the Scott County Medical Society was held at Davenport, Iowa, June 6. The following officers were elected: President, J. W. H. Baker; Vice President, F. L. LeClaire; Secretary, A. R. Nichol.——The Ontario Medical Association held its annual meeting at Toronto, June 5, 6 and 7.——A regular meeting of the Luzerne County Medical Society was held in Scranton, Pa., June 5.——The East Illinois Valley Medical Society held a regular meeting in La Salle, Ill., June 4.——The annual meeting of the Monroe County Medical Society was held in Rochester, N. Y., May 31. The following officers were elected: President, W. Sibley; Vice-President, H. T. Williams; Secretary, F. Remington.

Louisville Notes

Personal.—Dr. Leachman, reported in the last Journal as being dangerously ill, is much improved, and hopes are entertained for his permanent recovery. He will go to French Lick Springs for a rest and will be accompanied by Dr. J. W. Guest, who will remain at the Springs during the summer.

Academy of Medicine.—At the meeting February 7 a paper was read by Dr. Henry E. Tuley on "Milk," in which he pointed out the necessity of a radical change in the present lax system of conducting the production and sale of this article. The paper was interestingly discussed, and was considered of such importance that it was made the special order for discussion at the late meeting, with Dr. J. A. Larrabee to open the discussion. He read a paper at this meeting, and as a result of the ensuing discussion a committee consisting of Drs. L. M. Mathews, [illegible], J. A. Larrabee and Henry E. Tuley was appointed to draft a suitable ordinance looking to the production and sale of milk, which is to be submitted to the Academy for discussion. It is to be then indorsed by the Academy, and Dr. [illegible], the former President of the Academy, who is a member of the common council, has promised his support to the new measure, and will endeavor to have it passed. The ordinance will have embodied in it a sufficient appropriation to carry on the work.

[illegible].—Dr. W. H. Wathen has recently returned from the meeting of the American Association of Obstetricians and Gynecologists, which was held in Baltimore. He read a paper on "Vaginal Hysterectomy for Uterine Myomata and Bilateral Disease of the Adnexa."

Washington Notes

Medical Society of the District.—At the meeting of the Society held on the 5th inst., Dr. Bryan read a very valuable contribution to the study of suppurative diseases of the accessory sinuses and reported some cases treated. Dr. [illegible] read a paper entitled, "My Experience in the Treatment of Pelvic Pus Cases: Celiotomy." Dr. H. L. E. Johnson reported "A Case of Functional Blindness cured by Removal of two small Ovarian Tumors." These were presented together with other specimens removed by abdominal section. The meeting was made more attractive by the full discussions which followed on each subject.

The Washington Obstetrical and Gynecological Society.—The two hundred and thirtieth meeting of the society was held on the 7th inst. to listen to a most interesting and carefully prepared Essay on "Criminal Abortion," by Dr. J. Foster Scott. The discussion was opened by Dr. Joseph Taber Johnson. Dr. H. L. E. Johnson presented specimens of ovarian cysts, and tubal disease, removed since the last meeting.

Health of the District.—The report of the Health Officer for the week ending June 1 is as follows: number of deaths (still births not included): White, 50; colored, 32; total, 82. Death rate per 1,000 per annum, white, 11.73; colored, 17.95; total, 13.7. Death rate per 1,000 per annum for corresponding week last year, 24.0. The ordinary zymotic diseases continue to be rare in fatal form, except the diarrheal maladies, which numbered 4 victims. The mortality from typhoid fever seems to be on the decline. In the first quarter of the present fiscal year the deaths from this disorder numbered 80, in the second quarter, 70, and in the third quarter, 13, while in the month of April there was but one death thereform. So with diphtheria. Beginning with 40 deaths in the first quarter, they rose to 55 in the second quarter and fell to 17 in the third quarter, with but 1 death from this malady in April. Diseases of the circulatory, respiratory or cerebral organs present no salient feature, and a general view of the health of the city is altogether favorable.

Philadelphia Notes

A Donation of Half a Million of Dollars to the University of Pennsylvania —Mr Charles C Harrison, who for the past year has been Acting Provost, was elected Provost of the University of Pennsylvania on the 4th inst Upon accepting the office, he announced his intention of presenting, as a special endowment fund, the sum of $500,000, the income to be devoted exclusively to educational purposes, and not for building His idea in making this magnificent foundation was to honor the name of his father, Mr George Leib Harrison, well known as a writer upon social, economic and educational problems to the practical solution of which he devoted the greater part of his leisure, while successfully conducting a large business of which he was the head The conditions of this donation have not been definitely or finally settled, but it is understood that it is intended to be principally devoted to founding scholarships, for extending post-graduate instruction, and in assisting teachers to devote themselves to special branches of instruction for which they are particularly adapted, but from which, otherwise, the want of funds would debar them

College of Physicians —The monthly meeting of the College of Physicians was held June 5 Dr Thos S K Morton described a method devised by Gaillard Thomas, some years ago, of removing benign tumors from the female mammary gland without producing visible scar The plan recommended was to make the line of incision correspond with the natural crease in the skin, seen when the patient is in a standing position After incising the skin (four to five inches being enough), the capsule of the mammary gland is dissected from the chest muscles, and the gland turned up so as to expose the growth, which is then excised from beneath and the gland returned to place, without cutting any of the lactiferous ducts or having any hemorrhage A case was reported by Dr Morton in which after the operation had been done, the hair line cicatrix was perfectly covered by the natural sagging of the mammary gland, and there was no visible evidence of any operation having been performed The cosmetic value of this method is obvious to patients and may suffice to overcome objection to what is regarded as a mutilating operation It is a matter of considerable importance to a woman who expects to marry This operation is restricted to non-malignant growths

Dr Chas W Dulles read a paper entitled "Remarks on Hydrophobia," in which he stated that the danger of this disease is very much overestimated Even after the bite of a rabid dog, the proportion of cases which develop hydrophobia is very much smaller than is usually held to be the case He insisted upon the great need of a more careful diagnosis, and reported cases of uremia, and nervous disease, which had been called lyssa until the autopsy revealed their true character He strongly condemned the use of nitrate of silver and never cauterized nor excised the wounds, but simply cleansed them and applied an aseptic moist dressing During the past eight years he has not had a case of hydrophobia to develop in his cases, and therefore can claim a better death rate than even the Pasteur method has given

Dr S Solis Cohen exhibited a small instrument which was a development or a modification of the Ramage tube for respiratory gymnastics in the treatment of pulmonary consumption By breathing through the instrument, the current of air is controlled by two valves, which graduate the pressure to any desired degree, thus producing the effect of inspiring rarefied air and expiring into a condensed atmosphere Dr Cohen also presented a case of phthisis under treatment for a year in a young medical man who had gained three inches in expansion of the chest, twenty seven pounds in weight, and all signs of pulmonic consolidation had disappeared together with the bacilli from the sputum

Dr John H Musser reported a very interesting case of 'Multiple Carcinoma of the Bones" The primary lesion was located in the lower jaw, at the base of the molar teeth, which had been extracted, leaving a growth resembling an epulis, but which proved to be encephaloid cancer In the course of the case, nodes developed under the periosteum of the long bones and spontaneous fractures subsequently occurred in one clavicle, one rib, one humerus and both femora Polyuria was a prominent feature in the case temperature was about normal (99 to 100 degrees) patient was intensely anemic, had repeated hemorrha and died a few hours after a profuse hematemesis At autopsy, it was found that the stomach was dilated and erwise normal *The bleeding had come from an arter* the base of a perforating duodenal ulcer The patient been under observation about four years, since the nc had been first observed, and had even before this complai of digestive disorder, but no symptom calling attentior the ulcer of the duodenum had been observed during There was no attempt at bony union after fracture, but bones were supported by a mass of new growth which found to be encephaloid cancer

In discussing Dr Musser's case Dr Thos S K Mor reported the only case of the kind that had come under observation It was a young woman who had had two rations for encephaloid disease of the mammary gla While walking across the floor she fell and fractured femur Suspecting the nature of the disease and that fall was due to the giving way of the bone affected by ondary cancer, an unfavorable prognosis was given patient died in six days and at the autopsy there was fo only a mere shell of bone, the interior being the site secondary encephaloid cancer

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THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duti officers serving in the Medical Department U S Army, from 1, *1895 to June 7, 1895*

Capt Rudolph G Ebert, Asst Surgeon so much of the order as di him to report in person to the commanding officer, Ft Columbu Y , for duty at that post, is amended to direct him to report for at Vancouver Bks Washington, relieving Capt William H Arti Asst Surgeon Capt Arthur, on being thus relieved, will repor duty at Ft Columbus N Y

Major Timothy E Wilcox, Surgeon U S A , is granted leave of abs for one month and fifteen days, to take effect on his arrival in York City, en route to his station in the Dept of the East

Navy Changes Changes in the Medical Corps of the U S Nav the week ending June 8 1895

Surgeon J E Gardner detached from naval station, New Lon Conn , and wait orders to sea duty

P A Surgeon Clement Biddle detached from naval hospital, Chel Mass , and to naval station, New London Conn

Surgeon Franklin Rogers, detached from U S R S "Wabash," a the Navy Yard Boston Mass

Surgeon J L Wilson, detached from Navy Yard Boston, Mass , an the U S R S 'Wabash"

LETTERS RECEIVED

Axford, M Mendon N Y Alta Pharmacal Co St Louis, Mo , merman, C R Longmont, Colo Ashmun, G C Cleveland, Ohio

Bloodgood, Delevan Shelving Rock, N Y , Battle & Co St Lo Mo Bodine, J M Louisville, Ky Brown, A , Aniwa, Wis Billing M B , Baltimore Md Burnett, C H Philadelphia, Pa Boyd, J Santa Ana, Cal Brodbeck, Jno R Codorus P O , Pa , Bradley, J (2) Madison Wis

Cain, J S Nashville Tenn , Chaille, S E New Orleans, La Cl John H , Mechanicsburg, Ohio, Cumberworth, W H , Bennett s Cor Ohio

Dal, J W , Chicago, Ill Davis, C G , Chicago, Ill , Dios Chem Co St Louis, Mo

Ellis P V , Ghent Ky

Fairman L W Broadhead, Wis

Godfrey, B B , Hudsonville, Mich Gates, L M , Scranton, Pa, Gl T J Proctor, Mo

Holland, J W , Philadelphia, Pa Hill A H New York, N Y denstein, J , New York, N Y Hofmann J H , San Francisco, C Harsha, Wm , Chicago, Ill , Howell G , Tecumseh, Mich , Hum A L (2) Philadelphia Pa

Johnson, R W , Baltimore, Md

Knox C S , Superior, Wis Koelling & Klappenbach Chicago, Kohl Julius, Belleville, Ill Kenyon News & Postal Subscription Chicago Ill

Loeb, H W , (2) St Louis, Mo , Lehn & Fink New York, N Y , L worthy S B , Leavenworth, Kan Lord & Thomas, (2) Chicago, Ill

Martin F H Chicago Ill Minnesota Book Manufacturing Co , neapolis Minn Mellier Drug Co St Louis Mo Marks, A A , York N Y Morse Lyman D , New York, N Y McGahan C F , B lehem, N H Mason L D Greenwich Conn McLain, J S O City, Md Maxey H E Chicago, Ill Mudd, H H , (2) St Louis, M

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ORIGINAL ARTICLES

METHODS OF DIAGNOSIS AND THERAPEUTICS OF DISEASES OF THE STOMACH AND INTESTINES

d in the Section on Practice of Medicine, at the Forty-sixth Annual Meeting of the American Medical Association, at Baltimore, Md., May 7-10, 1895.

BY FENTON B. TURCK, M.D.
CHICAGO

Diagnosis based upon a group of symptoms only of little significance in determining pathologic con ions, and therefore is of no decided value in ional therapeutics. However, symptoms and his rs must not be ignored. When a group of symptoms esent themselves with a history pointing to a gas ic disorder, we must depend upon direct examination complete a diagnosis.

It has always been my custom to make a general ysical examination for the purpose of establishing diagnosis in gastric diseases. I begin with the hair, ontinue with the eyes, nose, mouth and skin, the eneral appearance of the body, and especially the ontour and configuration of the abdomen. I use oundary lines which connect fixed points: the edian line from the interclavicular notch to the ymphysis pubis, the parasternal lines (parallel to he median) from the junction of the middle and nner third of the clavicle, to Poupart's ligament, a ine connecting the apices of the twelfth ribs, another rom the xyphoid appendix to the twelfth rib (on oth sides), a transverse line connecting the anterior uperior spines of the ilia.

After examining the chest organs, we locate the solid organs of the abdomen—liver and spleen—by the usual methods. Then the size, position and location of the hollow viscera are determined. The usual method of percussion in locating hollow viscera often lead to grave errors, since the stomach may contain food and the transverse colon may be filled with fecal matter, so that the flat percussion may run far below the lower border of the great curvature. If, on the other hand, the stomach is empty and contains gases, and the colon is well dilated and inflated, these conditions may lead to similar errors. The method devised by v. Frerichs and also employed by v. Ziemssen of producing CO_2 with bicarbonate of soda and tartaric acid is now of historic value only. Ewald's method of introducing air through the stomach tube is reliable in cases in which the colon can be outlined definitely. To overcome the difficulty of outlining the colon, Ewald recommends the introduction of water into the colon. This is often impracticable and for obvious reasons can not always be depended upon.

Various instruments have been devised for locating the stomach, for determining its size and outline, especially that of the greater curvature, and for determining its motility and degree of sensibility on pressure. For determining the degree of pain, especially that found in gastric ulcer, Boas has devised an ingenious method by using what he calls the algesimeter. This consists of a cylinder containing a spring with an indicator graduated in 10 kg. When pressed upon the xyphoid appendix or twelfth dorsal vertebra it indicates the degree of pressure a person can endure in normal condition. When only from 2 to 5 kg. of pressure can be endured, it is considered abnormal and arouses suspicion of gastric ulcer.

Einhorn's gastrodiaphane is an electric light which is introduced into the stomach for the purpose of transillumination. It has been found very valuable in determining gastroptosis, simple dilatation and the rare cases of tumors and cicatrices on the anterior wall.

Einhorn also devised an instrument for determining the motility of the stomach. The electric gastrograph, as it is called, is described in the New York *Medical Journal*, September, 1894.

The gastric motor meter is an apparatus I have devised for determining the contractility and the movements of the stomach. It indicates 1, the character of the movements—respiratory (passive), or peristaltic (active); 2, the number of movements; 3, the degree of energy of the movements. It consists of a small rubber tube, to one end of which is attached a small oblong rubber bag. When this bag is inflated, it is pear shaped, and about three inches long with two inches at its greatest diameter. Bags of various sizes may be filled with air or water. The other end of the rubber tube is connected with a Schiel's manometer with water as an indicator. The collapsed bag is introduced into the stomach, inflated with air and connected with the manometer: the rise and fall of the manometer indicate the long respiratory movements and the short peristaltic waves. The small tube of the manometer shows a rise of 30 mm. during ordinary respiration; in deep respiratory movements there is a rise of 200 mm. or more. The peristaltic contractions in health vary from 10 to 15 mm.; in dilatation from 2 to 5 mm.

The fact that respiratory movements affect the pressure on the bag, showing a rise during inspiration and a fall during expiration, is of great significance. From these observations I would conclude that respiratory movements have the most marked effect on the mechanical movements of the stomach contents. The gastric unit is obtained from examinations and observations made on the stomachs of healthy persons. It is found that normal stomachs show 200 to 300 mm. (water) of pressure, produced by the contraction of the stomach and the respiratory movements. From this we can make an exact mathematical formula of the motor power of the stomach.

The contractility and dilatation of the stomach may also be determined by means of cables of various degrees of flexibility used with the gyromele[1] The stiff cables, after having been introduced into the stomach and allowed to glide along the great curvature, distend the stomach, while the more flexible cables will not stretch it The difference between the two indicates the degree of contractility and dilatation The revolutions of the sponge within the stomach can be readily palpated on the abdominal wall

The gyromele is not only useful for exploring the stomach, but by attaching the ordinary esophageal ivory bulbs, it can be used to locate strictures anywhere along the esophagus to the cardia The flexible cable being encased in a rubber tube is less dangerous than the stiff short whalebone formerly used for exploring purposes, which was not at all adequate and always involved danger of puncturing,

We use the gyromele for the purpose of removing adherent material from the walls of the stomach, for microscopic, chemic and bacteriologic examination

Microscopic examination will reveal epithelial cells of glands, round cells, leucocytes, bacteria of various forms, either in colonies or otherwise When colonies are found, it shows that there is an active bacterial growth, and a further bacteriologic study is necessary to determine the microorganisms which are present in gastritis

Chemic examination can be roughly made during the progress of treatment, as, for example, to determine the return of HCl Dr Wesener[2] has just finished a line of very interesting experiments in cases of anacidity of the stomach He has examined the stomach contents of patients after Ewald's test meal and found no HCl The patients are then asked to return to the clinic with an empty stomach No HCl being present the stomach is washed out to remove any other acids that may be present The gyromele is introduced and revolutions are made for five minutes On chemic analysis in a number of experiments, HCl was found to be present as high as 1 per cent This shows that HCl is secreted on stimulation. I have made use of this fact in establishing a differential diagnosis between functional disturbance and atrophy of the stomach In simple functional disturbances HCl is produced after the revolutions of the gyromele, while it is not found in atrophy

After we have determined the size, location and motor power of the stomach and the chemistry of the stomach contents, we make a simple bacteriologic examination To determine the character of the infection a more extensive and accurate bacteriologic examination is necessary By simply removing the contents and examining them, we can obtain no exact knowledge of the varieties of bacteria which are characteristic of the disease The material must be taken from the walls of the stomach This is done by means of the gyromele Cultures are then made, preferably by the method of developing microorganisms on the mucous membrane of the stomachs of pigs 1, this medium approximates a more natural soil for the growth of the microorganisms which are especially found in gastritis, 2, it produces a more luxuriant growth of colonies in less time, 3, colonies can be preserved *in situ*, the mucous membrane being dried and preserved as parchment

In carcinoma I have found lactic acid microorganisms to be more prevalent than in any other disease of the stomach Their presence in carcinoma of the stomach is so constant as to make it of great importance in the early diagnosis of carcinoma of the stomach (See Journal American Medical Association of March, 1895, Turck, on "Early Diagnosis of Carcinoma of the Stomach ")

THERAPEUTICS

Having reviewed the various methods of diagnosis, we will now consider the rational therapeutics that would result from an accurate and complete examination of pathologic conditions

Lavage of the stomach has been universally used for a number of diseases and is especially indicated in dilatation In a large percentage of cases, however, where lavage has been practiced, the removal of the stomach contents instead of improving the condition has caused rapid emaciation, on account of the withdrawal of nutritious material, and the dilatation has been increased by the weight of the water Indications for lavage are limited to selected cases of dilatation

Massage in the recumbent position has been recommended by both Cseri and Boas, as it empties the stomach and overcomes the objection of withdrawing nutritious material and weighing down the stomach However, this manipulation does not remove the material adherent to the walls of the stomach, in which are lodged the microorganisms, which form a very important pathologic factor in gastritis The indications in these cases are

1 To remove the adherent material

2 To disinfect as far as possible, or to render the soil unfavorable for the development and growth of microorganisms

If the stomach has been washed out until the water runs clear, it is observed after the gyromele has been introduced with three to five minutes' revolution that the contents then withdrawn contain thick tenacious masses, in which are found necrosed epithelial cells, cells from the mouth and esophagus, leucocytes and detritus of food swarming with colonies of different varieties of microorganisms The removal of this irritative material is still further facilitated by the use of soap solution made by dissolving one ounce of green soap in one quart of water It has also been observed that in cases where there has been anacidity the HCl would reappear after this treatment, and in cases of hyperacidity which might be due to the irritation caused by the microorganisms, this condition was alleviated

Furthermore, the motor power which had become abnormal, would resume its normal activity This method with its results was first presented before the International Medical Congress at Rome in 1894

I now present a method of disinfecting the mucous membrane which I have demonstrated in the laboratory This method has been used for the past year and has been satisfactorily proved to check the growth of colonies on the mucous membrane It consists of nebulizing oil of cloves and oil of cinnamon with a simple nebulizer, so that a cloud of pure essential oils is formed The apparatus I have devised for applying this coating to the wall of the stomach consists of a nebulizing bottle, connected with a Wolf bottle; this is in turn connected with a tube on the side of which is attached a smaller tube made in one piece with it. The inlet tube extends into the stomach; the outlet or shorter tube extends only to the cardia. The extra bottle prevents the contents of the stomach from entering the nebulizing bottle. The advantage of nebulized oil over aqueous spray is that it remains in contact with the mucous membrane for a longer time. I have also demonstrated experimentally that a thin layer is applied to the whole surface of the stomach. I recently made the following interesting observation: a patient complains of an intolerable sensation of hunger; after the nebulizer has been applied the sensation disappears and the patient feels very comfortable.

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[1] The uses of the gyromele (revolving sound) was first presented before the International Congress at Rome in 1894, with report of cases It was also described with additional cases in the Wiener Med Woch Nos 1 and 2, 1895 It consists of a flexible cable to the end of which is attached a sponge covering a spiral spring which can be removed and changed The cable passes through a rubber tube and this again is attached to a revolving apparatus for the purpose of producing revolutions of the sponge within the stomach

[2] Proceedings Illinois State Medical Society, 1895

Besides these oils any substance soluble in glycerin may be used: silver nitrate dissolved in small quantities of water; potassium bichromate (1 per cent solution can be used with glycerin); a weak solution of formalin. The nebulizer is applied for three minutes. The advantages of oil of cloves and oil of cinnamon in the nebulizer are:

1 It is antiseptic.

2 It prevents the growth of microorganisms. (See experiments in laboratory.)

3 It is analgesic; pain ceases immediately after application viz gastralgia.

4 It is a vasomotor stimulant; it assists in removing congestion; a feeling of warmth and well being is experienced by the patient after the application.

5 The introduction of air distends the stomach, and contraction forces the air out through the other tube, so that we have a pneumatic massage.

For cleaning the stomach, I use an apparatus which consists of a double tube: a small short tube with a perforated ball at the end to be introduced into the stomach; a larger tube for the immediate return of the water introduced. The water is forced through the small short tube under pressure and returns through the large tube. This procedure will remove material from the walls, especially if soap is used. The apparatus possesses a great advantage over lavage, as it will simply remove loose material in the lumen.

Among other advantages of this process of cleansing the stomach may be mentioned: in cases of dilatation, the large quantity of water which is necessary to wash out the stomach only aggravates the already prolapsed condition and distension of the stomach. To overcome this objection, Flemer recommends lavage in the recumbent position. In using the apparatus I have described, the water returns immediately through the large tube, so that it is impossible to overload or distend the stomach. Not only does this apparatus cleanse the stomach, but it also acts as a needle douche, and as such is a vasomotor stimulant. It has been used with remarkable results for the last year in cases of pronounced gastroptosis and dilatation, restoring the latent muscle and sluggish vessels to their normal condition.

Before this treatment, soap and water or one half of 1 per cent of formalin, or thymol, or resorcin, or oil of cloves is introduced through a syringe with the gyromele. As before stated, liquid soap is made by dissolving an ounce of green soap in one quart of water and is especially valuable in removing irritative material from the walls of the stomach, as well as cleaning the mucous membrane and neutralizing acids.

Lysol 0 minims, to 1 liter of water with the liquid soap is a valuable antiseptic solution. It is useless, however, to apply antiseptics before the stomach has been thoroughly cleansed.

[illegible] THERAPEUTICS

Congestion of the stomach and abdominal viscera is shown by cold hands and feet and the peculiar color of the fingers and lips. To distribute the blood over the body and remove the contraction of the arterioles, the following bath (described in Wiener Med Wochschr, No 2 1895) is used: the patient is placed in a common salt bath at 100 degrees F and requested to be quiet. The temperature is raised 110 to 112 degrees F, in some cases to 116 degrees F, until the whole surface of the body has turned red. The patient is then removed from the bath and massaged all over the body with a cake of ice. This stimulates the vasomotor nerves and increases the heart's action. A stream of ice water containing a little ammonia is directed to the body of the patient. A large horse syringe or pump is used in applying the stream. The procedure is similar to a Scotch douche.

ADVANTAGES OF THE BATH

1 It increases the metabolism of the body, producing general activity.

2 It effects the removal of toxins.

3 It promotes the supply of fresh arterial blood to the tissues.

The stimulation lasts from six to twenty four hours, according to the case. General improvement ensues immediately, as the bath has no weakening effect.

A bath is given every day during the first week, then three times a week until the general condition of the body has improved. Counter-indication: mitral regurgitation without compensation and fatty degeneration of the heart.

TREATMENT OF THE INTESTINES

For the purpose of lessening putrefaction in the intestines, a pill is made, containing oil of cloves and oil of cinnamon, and in some cases ox gall; this is coated with several layers of shellac and betol. The coating is not dissolved in the stomach and the pill passes into the intestines where it is set free. Remarkable clinical results have been obtained in some obstinate cases of diarrhea by the use of these pills.

Cases of dilated sigmoid and atony of the lower bowel and severe cases of constipation have been overcome through the use of the gyromele with revolution. Where there is marked congestion of the colon, atony of the colon, and retention of fecal matter, I have introduced ice water through a soft rubber tube. The patient lies with hips elevated; the ice water is introduced and then massaged out through the tube after it has been disconnected from the reservoir, which is placed five feet above the patient.

ADVANTAGES OF USING ICE WATER

1 It stimulates the vessels, and

2 Increases the muscular action of the colon.

Lavage of the colon with warm water simply washes out the mucus, which should be retained in certain cases for the purpose of lubrication. Its removal aggravates the symptoms of constipation.

Two quarts of ice water are generally used to which in some cases tannic acid may added, also lysol, one ounce to one quart of water, liquid soap, inspissated ox-gall to one quart of water

Constipation is also much improved by eating bran gems three times a day with meals Common bran from the feed store is used in making these

ADVANTAGES OF BRAN GEMS

1 They mix with the food and assist in the churning process

2 They furnish material for stimulation to the whole intestinal tract

3 They do not furnish a nutrient medium for the growth of microorganisms

Boas recommends the use of two teaspoonfuls of milk sugar at night to overcome constipation This, however, has been found inadequate Treatment by dietetics, the use of bran lavage of the colon with ice water, the use of the gyromele as described, with the addition of faradization as recommended by Ewald, have given very satisfactory results

MECHANICAL THERAPEUTICS

In many cases of gastric disease, the abdominal walls are relaxed, so that they allow the protrusion of the abdominal organs, presenting the appearance known as Glenard's disease The common abdominal belt is not sufficient to hold up the abdominal wall, as it simply presses the organs backward I therefore utilize the usual web abdominal belt, to which I have affixed lifting straps The lower strap is drawn first It is fixed just above the pubis, passes through loops on each side and runs upward and backward and is buckled to the support at the back A second strap is attached above this and also brought to the support at the back This elevates the viscera and keeps them in place However, this is not sufficient, as it will not cause hyperplasia of the abdominal muscles which is necessary to hold up the viscera For the purpose of producing hyperplasia I use Gaertner's ergostat This apparatus is something like a grinding-stone The patient turns a wheel with friction brake, which is weighted to suit different cases I have devised a method of using the abdominal muscles by extending the arms and legs perfectly straight, thus throwing the work mostly on the trunk and giving exercise to the abdominal muscles Deep breathing exercises, arm extension, backward bending, side-twisting are the movements performed During all the exercises the legs must remain extended, so as to throw the work on the trunk as much as possible The best physiologic effect is obtained by exercising slowly Respiratory exercises are the best for the stomach, since they produce stomach movements

DISCUSSION

Dr Stockton—I am not willing to allow this very interesting paper to pass without discussion The Doctor has taken up so many points that he has not been able to give to some of them the attention which he would like to give and which he will undoubtedly complete in further contributions He has suggested a great variety of thoughts The contributions that he has made to the treatment of gastric diseases are certainly very ingenious and very interesting He has spoken of the function of the instrument which he calls the gyromele which seems like a very interesting instrument The Doctor speaks of the use of that in differentiating between the functional acidity and gastric disturbance I can not quite agree with him as to that point We have various degrees of anacidity There are many cases of functional anacidity, without, to my mind, demonstrable lesion of the mucous membrane where even marked irritation by electrical currents, or other local stimulants in the form of drugs, seem not to produce local symptoms Occasionally we do find an acid secretion As to the limitation of lavage, there can be no doubt that lavage, like every other new procedure, has spread widely into popular use for obvious reasons, but has been overdone It is used where it is quite improper and without any depth of purpose in view I congratulate the Doctor upon calling attention to the uselessness of lavage in many conditions, and in cutting down its use to merely emptying the stomach in a therapeutic sense. Finally, may I ask him to explain a little more definitely about the coating of the pills to which he referred, so that we can know exactly how it can be obtained, or how we can get this coating The ordinary pills which pass the stomach untouched are very prone to pass the intestines untouched.

Dr Turck—The statements that this revolving apparatus does relieve functional disturbance and stimulates the formation of hydrochloric acid were quite as surprising to me as they are to the Doctor now This work was accomplished by Dr Wesener, who is with me in the clinic work, and a large number of cases were examined We found by all the other means that we could not in any way produce any hydrochloric acid The introduction of drugs is not sufficient, you can give any amount of hydrochloric acid, nux vomica or faradization, but there would be no amount whatever found in the stomach The introduction of the revolving apparatus for five minutes would start up a circulation, and at once stimulate all the glandular elements of the organ, because you reach the whole of the stomach I have been able to apply materials in the entire organ in that manner, and demonstrate it upon animals As to lavage, about four years ago I used to think that lavage was a great thing, but we would find that some of the cases became thinner under its use In fact, many of our cases would become rapidly emaciated At first we thought it was because of the loss of the food which was washed away, and many would come with an empty stomach, and we washed out the secretions The simple washing out of the stomach is not sufficient in gastric disturbances. In cases of dilatation the removal of the irritating material is quite useful But it seems apparent that the secretions which are removed by the use of lavage are essential to the system, and that their abstraction results in nutritive loss As to the pills, Dr Rode, of Chicago, has made those pills Several coats of shellac and betol were found to be necessary The pills were dipped into the fluid, and then taken out and allowed to dry, and then this was repeated over and over again These pills were found to pass through the stomach into the intestine, without being absorbed in the stomach and contents set free in the intestine

Note—All the apparatus mentioned in this article can be had of Tieman & Co, New York, Hausman & Dunn, Sharp & Smith, or Truax, Greene & Co, Chicago

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THE DIFFERENTIAL DIAGNOSIS OF CHOLELITHIASIS

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7 10, 1805

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General Statement—Gall stones were observed by Johann Kentman in 1565 They occur at all ages, having been observed in the newborn infant Ten per cent of all adult males,[1] 25 per cent of all adult females[2] and 36 per cent of the insane[3] have gall stones Schroeder of the Strassburg Hospital, says they are found in 4 4 per cent of all males and in 20 6 of all females, especially if they have borne children The number varies from a single stone to over eight thousand[4] Symptoms are observed in 1 per cent of those having gall stones As the surgery of the gall tracts is brilliantly successful and inasmuch as solution of the stones is an illusion, and removal by medicines is seldom successful, an early and correct diagnosis is important, that we may turn them over to a surgeon whom they should consult, in order that they may have a chance for recovery. Send them to a surgical clinic and not to Carlsbad.

Diagnosis.—In the differential diagnosis of cholelithiasis it will facilitate our thinking about the matter if we divide the cases into two classes, placing in the first class those in which there is stone in the cystic duct or in the gall bladder, describing the signs and symptoms and considering also the affections with which it is liable to be confused.

In the second class we place all the cases of stone in the common duct. The latter are always accompanied by more or less jaundice, while in the former for very obvious reasons jaundice is absent. We should not forget, however, that in a given case it may in the early stages belong to the first class while the stone is still in the cystic duct, and that it may subsequently pass on into the common duct and give rise to all the characteristic phenomena of obstruction at that point.

As already stated the fact that 10 per cent. of all males and 25 per cent. of all females have gall stones, while only 1 per cent. of all these have symptoms, makes it evident that we are to concern ourselves only with those cases which manifest symptoms of stone in the gall bladder or in the cystic duct. The diagnosis is sometimes easy and at other times it is exceedingly difficult. The most characteristic symptom is the colic, which consists of an acute, severe pain coming on a few hours after a meal, at the time when the food is passing through the duodenum. It is usually felt in the right hypochondrium or in the epigastric region, is commonly sudden in onset, and varies from a feeling of uneasiness and discomfort to one of such extreme agony that it becomes unbearable and convulsions may occur.

The duration and intensity of the attack are varied by the size and situation of the stone, or stones, the age of the individual, the posture of the patient, lying on the belly often relieving the pain, the course of the stone whether dropping back into gall bladder or passing on into the common duct, and lastly, intensity of the nausea and vomiting. Probably the extreme relaxation allows the stone to fall back, pass on, or permits the bile to flow by, or else relaxes the spasm of the muscles of the duct. The pain may last from a few minutes to a week. Southworth says that histology has demonstrated that in youth the muscular fibers are abundant in the walls of the duct, while in old age they have either atrophied or disappeared. This is denied by Strumpell. This would explain the variation in intensity and duration of the pain which is probably caused by the spasmodic contraction of the muscular fibers upon the passing or impacted stone.

The accompanying symptoms are chills, fever as high as 104 degrees F., profuse sweats, but without distinct regular periodicity. The pulse is frequent, small, soft, the face pale, bathed in a profuse sweat, there may be a condition of collapse and reflex cramps may occur in the legs, arms, etc.

Physical Examination.—It may be laid down as a general proposition that dilatation of the gall bladder is common and that atrophy of the gall bladder is uncommon where there is any obstruction of the cystic duct from stone in the gall bladder. On the other hand, atrophy is the rule where there is movable stone in the common duct. The gall bladder may vary from the normal size to that of a large tumor reaching to the pelvis. When there is a palpable tumor it will be found to descend with inspiration, is continuous with the liver, describes the arc of a circle the center of which is beneath the right lobe of the liver, is not as freely movable as a movable kidney. In rare cases, the rubbing of the stones in the gall bladder may be felt by the palpating finger. When in addition to the tumor the calculi may also be palpated this serves to distinguish them. In rare cases the grating sound may be heard upon auscultation and still more rarely a friction fremitus from a localized peritonitis may be elicited by the same method of examination. During the attacks there is tenderness over the region of the gall bladder. When in addition to the foregoing the stones are found in the feces it amounts to an absolute demonstration. The occurrence of jaundice makes it almost equally certain. It is to be borne in mind, however, that gall stones may remain in the bowels for many days and also that it is far more important that not finding them in the stools is only negative evidence, as it has been shown experimentally that when gall stones are swallowed, they may be dissolved in the alimentary canal and do not reappear in the feces. Exploratory puncture needs to be mentioned only to be condemned as criminal.

The mode of termination of an attack may be either by the falling of the stone back into the gall bladder, it may pass on into the intestines, or it may become impacted in the common duct. The intervals between the attacks vary from a few days to many years. A stone in the gall bladder may be passed and, no others forming, there is no recurrence of the colic. On the other hand when there is a movable stone in the common duct one of the characteristic evidences is frequent recurrence, perhaps every few days. Lastly, with stone in the gall bladder or in the cystic duct, there is an entire absence of the characteristic signs and symptoms of stone in the common duct. It will readily be seen that, while the diagnosis is easy in the typical case, it might readily be confused with lead colic, malaria, renal colic, peritonitis or gastralgia. The following points ought to serve in distinguishing them.

Lead Colic.—This may commonly be easily differentiated, because, in addition to the colic, there is nearly always some of the other manifestations of plumbism. We should consider the occupation, water supply, food, cosmetics, etc. Among the other evidences are blue lines along the gums, lead may be found in the urine after the administration of the iodid of potassium, there may be dropped wrist and obstinate constipation. In addition to these more common evidences there is anemia, there may be multiple neuritis, with sensory and motor derangements, and cardio vascular-renal changes are common.

Malaria.—The chills and fever followed by profuse sweats which occur in cholangitis or cholecystitis may be differentiated by bearing in mind that in malaria the chills are distinctly periodical, the spleen is enlarged, the complexion is sometimes characteristic and, lastly, the plasmodium of Laveran will be found in the blood.

Renal Colic.—In renal colic the pain is more likely to start in the lumbar region, extend forward, thence downward along the inside of the thigh and also to the testicle in the male, causing its retraction. There will be present vesical tenesmus, tenderness over the kidney, blood and pus in the urine, absence of bile in it, and the feces will be normal in color If the kidney be movable and enlarged it may be grasped between the two hands and will not descend with inspiration, is freely movable and may be replaced in its normal position, and the colon usually lies in front of it It goes without saying that it is only in disease of the right kidney that any confusion can arise Tumor in the region of the gall bladder may be due to carcinoma of the head of the pancreas, echinococcus cyst, fecal impaction, renal tumor or movable kidney

Peritonitis —While there is a remote possibility of peritonitis and hepatic colic being confounded, yet the association of the former with nephritis, typhoid fever, dysentery, tuberculosis, appendicitis, infectious diseases and trauma, the hard, small, tense pulse, drawn face, shallow thoracic respiration, tympanitis, vomiting, etc , should leave no doubt in the mind as to the true nature of the affection

Gastralgia —Pain in the stomach is due to irritation of the sensory fibers of the vagus, either in its terminal filaments or nucleus, or in reflexion from higher centers Thus the causes may be numerous, the manifestation uniform The attacks of pain may closely simulate an attack of gall stone colic Indeed, I have no doubt that many of the cases diagnosed as gastralgia are hepatic colic The following points should be borne in mind that not uncommon class of cases where the gastric crises are among the earliest manifestations of tabes as first described by Charcot The other evidences of this disease of the cord would enable us to make a correct diagnosis Then there are the hysterical gastralgias where the detection of the hysteria enables us tc recognize the true nature of the affection The gastralgia of neurasthenia will be associated with other evidences of the neurasthenic condition In all the foregoing, there is no fevor, no palpable tumor, the onset of pain has no reference to food or time of day, there is no change in the taste in the mouth, no gall stones are found in the feces, and lastly, they never end in an attack of jaundice with the characteristic changes in skin, pulse, urine, feces, blood, etc

It seems probable that we are not yet in a position to be dogmatic in regard to the question whether a cholangitis or a cholecystitis is present or not, as we may have fever, chills and sweat without any lesion of the mucous membrane, while on the other hand, empyema of the gall bladder may exist without chill, fever or sweat [8]

Stone in the Common Duct —The early diagnosis of stone in the common duct is of the utmost importance, as the operative procedures instituted for its relief are more difficult and dangerous than for stone in the cystic duct or gall bladder, and at the same time the indications for removal are more imperative In most cases, the diagnosis ought to be reasonably easy if the following evidence is carefully considered

History —Remember the age, sex, and if a female whether she has borne children A very important point is the history of a previous attack of jaundice, even though many years have elapsed Also whether it has been preceded by attacks of colic, unaccompanied by jaundice, and perhaps diagnosed as gastralgia

Jaundice —As all jaundice is obstructive,[9] it must follow that this is one of the most constant signs of stone in the common duct Immediately after an attack of colic the jaundice becomes intense, while in the intervals between the attacks it fades but does not disappear entirely so long as the stone remains in the duct A varying degree of jaundice which does not disappear entirely between the attacks is characteristic of a movable stone in the common duct

Colic —The attacks of pain are similar in character to those already described They may be slight, vague, short, or intense and long When there is a movable stone in the common duct, and it is too large to be passed and where the duct is dilated sufficiently to allow the stone to move freely in the duct, the attacks are usually frequent, occurring every few days, are not often very severe and nearly always relieved by lying on the belly On the other hand, with stone in the cystic duct, the intervals between the attacks may be from a few days to many years The attacks are usually accompanied by chills, fever and profuse sweat

Urine —During the attack of colic the urine contains an abundance of bile, while in the intervals it is diminished but does not disappear entirely Biliary poisoning or cholemia ultimately causes some degeneration in the hepatic cells Poisonous products are not rendered innocuous in the liver All these products irritate the kidneys and renal inadequacy results There may be a slight amount of albumin in the urine, the latter being lessened in amount The urea is diminished on account of the interference with the function of the liver, the total solids are much less than normal, and this faulty lessened elimination of waste products is probably the cause of the melancholia, while the renal inadequacy is one of the great dangers in severe, long continued jaundice from any cause So long as the poisons are eliminated by the kidneys the urine is poisonous and may cause convulsions in animals, but if the kidneys become inadequate then the patient may be poisoned Jaundice urine is convulsive and not narcotic [10] This liver inadequacy also explains why it is that in some of these cases, some time before the fatal termination, the jaundice begins to fade, this leading to the fallacious hope that the patient is improving Instead of being a beacon of hope it is often a signal of grave danger

Stools —During, and frequently long after the attacks, the bowels are obstinately constipated and the stools are clay-colored In the intervals between the attacks the feces may be coated with a darker layer and the breaks and fissures may be colored, showing that some bile is reaching the duodenum

Circulatory System —The pulse is slow and infrequent, often not over 40 per minute, the blood pressure is low and septic endocarditis may occur The blood shows a fragmentation and destruction of the red corpuscles and the hemoglobin is diminished

Digestive System —The appetite is poor, tongue coated, bad taste in the mouth and the rate of diminution in body weight is proportioned to the degree of obstruction In addition to the foregoing there is intense itching of the skin, tendency to hemorrhage, melancholia, etc

PHYSICAL EXAMINATION OF THE LIVER REGION

It may be laid down as a general rule that a continuous obstruction of the common duct, from any cause, leads ultimately to dilatation of all the biliary passages, including the gall bladder This is seen in a marked degree in cases of compression from cancer of the head of the pancreas malignant disease of the duodenum involving the duodenal end of the common duct Nevertheless it may be asserted with equal dogmatism that in cases of movable stone in the common duct there is ultimately atrophy of the gall bladder and this atrophy of the gall bladder is one of the most characteristic signs of movable stone in the common duct Not only this but it gives indisputable evidence of the folly of connecting an atrophied gall bladder with the duodenum

The statement is made by Frerichs[13] that the gall bladder is dilated and yet he tells us that he observed that later in the disease it "gradually lost its tenderness and distension and caused but little inconvenience

The reason for the atrophy of the gall bladder is probably the following with the patient in the upright position and with a movable stone in the common duct it is most easily accommodated naturally lies at the mouth of the cystic duct and thus by its action as a ball valve prevents the bile from reaching the gall bladder The bile has a specific gravity of 1010[9] while gall stones especially when composed largely of pigment and calcareous salts, etc, may have a specific gravity as high as 1960[12] If the patient lies on the belly the stone sometimes from the force of gravity alone falls back into the wider portion of the tube the flow of bile is less obstructed and relief is obtained On the other hand patients tell us that they hope they will get very sick as they will then get relief more quickly Nausea and its accompanying relaxation allows the bile to pass the obstruction The change in the urine feces, skin, pulse, etc, have already been described

Not only is the course as described, important from a diagnostic standpoint but it is of far greater importance in indicating methods of operation This paper is intended to discuss diagnosis only, but as a medical man I desire to enter my earnest protest against simply connecting a gall bladder, atrophied from obstruction, with the duodenum and then not removing the stone from the duct It does not do away with the ball valve action of the stone, increases the liability to malignant disease[14] and is of little value to the patient

Any one of the following may be mistaken for stone in the common duct catarrhal jaundice, cancer of the pancreas, cancer of the gall bladder or ducts, cancer of the liver, malaria, disease of the heart, tuberculosis of the liver

Malaria has already been considered

Catarrhal Jaundice follows or accompanies gastric disturbances There is absence of chills, temperature, colic, extensive emaciation and the jaundice is of a mild unvarying type

Cardiac Disease which causes such extensive hepatic engorgement, thus favoring the accumulation of mucus in the tubes, may give rise to jaundice, but it is apt to be mild in degree and the evidences of cardiac disease could not possibly be overlooked by any careful diagnostician

Cancer of the Liver —Remember, that cancer of the liver is nearly always secondary, that the liver is usually enlarged, that there may be irregular, dense, firm, hard nodules, rapid emaciation, cancerous cachexia, ascites, malignant disease elsewhere, jaundice of gradually increasing intensity, or else absent entirely The gall bladder will be greatly distended if the growth involve the common duct

Cancer of the Head of the Pancreas —This disease is often diagnosed as gall stones In perhaps the majority of cases, a correct clinical diagnosis is impossible To decide between an immovable stone and cancer of the head of the pancreas is rarely possible Both may cause jaundice of an unvarying intensity or if any variation, then a gradually increasing degree When the pancreas is affected and there is pressure upon the common duct the jaundice is constant In cancer of the caput there may be pain of a lancinating character, glycosuria intestinal indigestion, fat in the stools, cancerous cachexia ascites if the veins be compressed *The onset of the* jaundice is gradual, not sudden and not preceded nor accompanied by colic, and the gall bladder will usually be found to be dilated

Cancer of the Gall Bladder or Ducts —Unlike malignant diseases of the liver, cancer of the ducts and bladder is commonly primary When we remember that Musser has shown[15] that 91 to 95 per cent of all cases of cancer in this locality are accompanied by gall stones and that the latter probably bear an etiologic relation to the former, it will be conceded that the clinical picture will change depending on whether the stone or the new growth is the predominant factor in the case It is probably seldom that a correct clinical diagnosis is made

The necessity of an early correct diagnosis is perhaps best indicated and emphasized by the dangers of delay Perhaps the greatest and most important of these is renal inadequacy as already pointed out Then we must remember the possibility of organic change in the liver itself the increased tendency to malignant disease and the danger of cholemia in an attack of which the patient may die Even though the patient do not succumb to an attack of cholemia the heart may become so weakened and its muscle so degenerated, the blood pressure so low, and the tendency to hemorrhage so much augmented that it increases the danger of operation and the probability *of death during or soon after it* either from renal or hepatic inadequacy Suppurative cholangitis with or without perforation is not a remote danger, and either may lead to a fatal termination When a stone has been diagnosed in the common duct and there is progressive emaciation and cholemia, the patient should be operated upon without delay

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In only one of the cases upon which this paper is based was an attempt made to determine this point The patient was my own brother and the case was one of multiple stone in the common duct There were chills, sweats and a temperature of 102 degrees F He was operated upon by Dr Christian Fenger of Chicago and at his suggestion Dr Stanley P Black made cultures upon agar agar and gelatin both from the bile as it flowed from the wound and also from the scrapings from the surface of the stones These cultures were negative

DISCUSSION

DR MUSSER, Philadelphia—There are many thoughts which arise in connection with a paper of this character, and there are a few, especially, dwelt upon by the report in Dr Webster's paper which to me are of striking interest, and I think should be emphasized From very considerable experience in connection with cholelithiasis, I am sure that we can not rely as definitely upon age as an element in the diagnosis as the text-books would lead us to infer We have been taught that gall stones, prior to 30 years of age, were extremely rare, at least the symptoms which lead us to believe they are present were of rare occurrence My ideas in regard to this have been changed, and I am sure that as early as the fifteenth year gall stones may be formed and may give rise to symptoms This was very much emphasized by a case which came under my notice during the winter, a man 24 years of age, of the bilious type, had obstruction of the common duct The diagnosis was made without much difficulty, and after being under observation for a short time it was found necessary, because of the rapid destruction of the blood, to employ surgical measures Some 160 gall stones were removed The interesting point about it was that the very attacks from which he suffered at the time that we could diagnosticate biliary obstruction, he had suffered from since the time he was 18 years of age, and I am quite sure that these attacks of pain in the epigastrium were due to the presence of gallstones There were found such an enormous number of stones that it was almost positive that a long term of years must have elapsed during their development Many of the stones were large, exhibiting a number of layers, which must have required many years in their formation Again, in regard to this very symptom of pain, I am sure that we have cases of biliary obstruction without the occurrence of much pain Pain is a symptom which is present in a large majority of instances, but it may come on suddenly, and at stated intervals, and still be due to gall stones In a recent case the pain was not only a remittent factor, but there was scarcely any distress in the region of the liver Every two or three weeks, however, there would be an attack of distress, with vomiting, clearing off in a short time, with the other evidences of cholelithiasis In the differential diagnosis, the question of gastralgia was touched upon I am beginning to be suspicious of gastralgia as a disease, except in connection with neurasthenia, and organic nervous disease, as locomotor ataxia and save, too, in connection with organic disease of the stomach I am inclined to think that a large majority of the cases that are called gastralgia are due to gall stones I am satisfied that if the pain is severe, and if the patient is debilitated or prostrated on account of the pain, that an exploratory operation is certainly warranted, in order to determine absolutely the presence or absence of cholelithiasis In many cases which had been treated, just as this young man I refer to had been treated, for gastralgia, the trouble has turned out to be gall stones Barring the limitations I have given, gastralgia is extremely rare I should like to have heard the reader laying down some of the diagnostic indications by which we could be guided to resort to operative measures He did refer incidentally to renal indication and the danger of development of polemia I am guided very much by the examination of the blood The bile destroys the red blood corpuscles, and after the destruction falls below 3,000,000 it is surprising to find how rapidly this takes place, it is, indeed, not only surprising but shocking A case which I had under observation fell to 2,500,000, and suddenly I found the blood reduced to 1,800,000, and he went into profound polemia, or the comatose state which accompanies profound anemia and death ensued, whereas if I had resorted to operation early the patient's life would probably have been saved Watching the blood, therefore, is an indication I do not feel that in a case of gall stone you should at once resort to operation You ought to hold your hand firmly on the case, observing the urine, and all the other conditions, observing all the danger signals, and when these are out do not hesitate to operate

One word further many diseases have been confounded with gall stones, and I think Dr Orr of London wrote a paper on these affections I would refer to a case of pneumonia I was asked to see The patient was being treated, however, for gall stones The man had a very intense and severe diaphragmmatic pleurisy, he had ascites, as often occurs in pneumonia, there was vomiting, and many other symptoms of the hepatic colic, and the physician in attendance felt quite sure that he was treating a case of hepatic colic One of the very important symptoms, and a symptom I always inquire into and believe to be present, is the occurrence of fever This has been so extensively treated in papers recently that it is not necessary to refer to it again, that is, to that form of hepatic intermittent fever, except to say that it is a common form, very frequently attending gall stones and may lead to confusion with other affections

Dr Turck, Chicago—It is to be regretted that there is not more time for the discussion of this paper There are two points of importance in differential diagnosis between ga stones of the cystic duct, of the gall bladder and of the co mon bile duct The differential diagnosis must be made, it is of great importance In the bile stones of the commo duct, in which there is a saccule formed behind the openin we can not consider anything else in a case like that but a operative procedure at once, because we have seen the di astrous effects from retention of poisons, the irritation of th vessels, etc What is the temperature due to? There h been a great controversy waged between two schools, th German and the French, upon this point, the German hol ing that it is bacteriologic in its nature, and the Frenc claiming that there are no germs connected with it Rece experimentation has thrown the balance in favor of th French school, because the bacteriologic examination of th gallstones of the bile, and of the material from the wal has revealed negative results As to the differential dia nosis between bile stones in the cystic duct and in the ga bladder, and the differential diagnosis between those in th gall duct, a little remembrance of anatomy is required as the manner in which the cystic duct branches off, runnin to the gall bladder There is atrophy in case of obstructio of the bile duct, of the gall bladder, and there is dilatation the gall bladder in cases of gall stone of the cystic duct, b cause in case of gall stone of the cystic duct we have an i creased secretion of fluid and dilatation occurs In the othe case there is a loss of use of the gall bladder and atroph results We are also aided in this differential diagnosis b the examination of the blood, of the urine, by the physic examination, and a careful analysis of the symptoms of th case

Dr Webster—The point referred to by Dr Turck of Ch cago, in regard to the etiology of these cases is very impo tant, and yet in my paper I simply made this note, and d not really intend that it should go into discussion I appr ciated the importance of it, but did not want to take it u as I desired to confine myself as far as possible to the dia nosis and not to the etiology Dr Musser regretted that did not go more thoroughly into the question of indication for operation The statements which I made were that th indications for a correct diagnosis were those that indicate operation If there is gradual emaciation, with the evidenc of stone in the common duct, it is an absolute indication fo operation I referred also to the examination of the bloo The careful examination of the blood, estimation of th hemoglobin and number of corpuscles from day to day is better fact in determining the patient's condition than cli ical evidence, but where you can not do this you must rel upon the clinical evidence that the patient is losing in weigh I wish to emphasize again, not only the state of the blood, bu the condition of the heart We have degeneration of th heart muscle, renal injection, liver injection, and I thin these last two points especially have not been understood b the profession as they should be, and that whenever we be gin to get renal and hepatic injection, these are signs of gre danger and absolute indications for operation

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TREATMENT OF ASIATIC CHOLERA

Read in the Section on Practice of Medicine, at the Forty sixth Annu
Meeting of the American Medical Association, at
Baltimore, Md, May 7-10, 1895

BY ELMER LEE, A M, M D, Ph B
CHICAGO

Spasmodic cholera—called also malignant, ep demic, Asiatic, Indian, blue, and pestilential choler —is generally epidemic, though not contagious Th first symptoms are generally experienced during th night, sometimes beginning with a light general un easiness and moderate diarrhea, at other times th symptoms come on violently and follow each othe rapidly In fatal cases death usually occurs a some period between six and twenty-four hours, i a few fatal cases the patient lingers two or thre days The ordinary course of symptoms are more o less diarrhea, the discharges at first feculent, bu soon presenting the appearance of rice water o gruel, there are flying pains, or sense of coldness i the abdomen, as if purgative medicine were about t operate, the countenance is pale, there is nausea vomiting, prostration of muscular power, and nerv ous agitation, cramps in the legs, arms, loins and abdominal muscles, [illegible], pale, intense thirst, and an [illegible] desire for cold water. In most cases [illegible] all these symptoms may appear [illegible] or almost simultaneously. In some cases the premonitory symptoms exist for [illegible] days, and come on [illegible] the patient is prostrated at once. When the disease comes on suddenly the cramps [illegible] the fingers and toes rapidly extending to the [illegible]. The eyes are sunken and surrounded by a dark circle; there is vomiting and purging of [illegible] matter mixed with flocculi; the features are sharpened and contracted; the expression of the countenance is wild and confused. The [illegible] extremities, and often the whole surface of the body, manifest a [illegible] intensity of a leaden bluish or purplish hue; the extremities shrunken; the nails blue; the pulse thready or wholly imperceptible at the wrist, arm, axilla, temple or neck; there is great restlessness, incessant jactitation, severe pain in the epigastrium, loud moaning or groaning, difficult and oppressed breathing, difficult inspiration with short and convulsive expiration, voice hoarse, whispering or nearly suppressed and plaintive; the tongue is white, cold and flabby, and the external temperature often sinks below 80 degrees; convulsions recur at short intervals, or a constant tremor exists. The secretions of bile, saliva, tears and urine are entirely suppressed, and a cadaverous odor exhales from the body. The patient retains his faculties to the last.

Some of the symptoms may be disproportionately severe or may be entirely absent. Those usually regarded as pathognomonic are watery dejections, blue appearance of the countenance or surface, thirst, coldness of the tongue and pulselessness at the wrist.

The foregoing description of the symptoms of cholera is indicative of the nature of the disease calling for human aid. The time in which to treat the patient sick with cholera is exceedingly limited. What is to be done must be executed with rapidity. There is not a moment to lose between the time when the patient is first seen and the accomplishment of severely practical efforts. Many wise theories may be promulgated, but there are few practical measures that will avail against Asiatic cholera. The experiences during the cholera epidemic of 1892 in Europe, both in Russia and Germany, produced in me a profound conviction that, for the most part, remedial agencies that have been used are of questionable utility. Nearly every prominent remedy proposed and tried has been found to end in greater or less disappointment. Years ago, great reliance was placed upon the far famed "mild chlorid of mercury." Twenty and ten years ago this remedy was given in large doses. Three years ago, during the latest epidemic, small doses prevailed. Next to this, the synthetic drug salol, the product of the laboratory of the Imperial Institute of Experimental Medicine in St. Petersburg, was the most widely used and the most favorably received. Professor Nenski, the originator of salol, personally informed me that the value of the drug could not be seriously recommended as of much importance, but that it perhaps answered the requirements as far as any drug could answer, in the hands of his colleagues. Widely circulated and various reports, enthusiastically commending and moderately commending this remedy were received by the Professor in St. Petersburg, but he himself was silent as to its efficacy. The far famed and recently much advertised drug quinine has been used and has been [illegible] as [illegible] thing from before the eyes of the profession [illegible]. Some of our [illegible] men [illegible] have [illegible] of [illegible], as [illegible] malarial disorders, and some [illegible] the medicine [illegible] high [illegible] the position of [illegible] in the [illegible], formal real treatment [illegible] with the rapid and desperate symptoms of Asiatic cholera. Quinine has a [illegible] advocate in our own country in the person of a well known professor in one of the Ohio medical colleges. It was not used to my knowledge in the treatment of cholera during the last epidemic in Europe.

A remedy was brought to Hamburg during the latter part of the epidemic of 1892 by the representative of an English syndicate, who [illegible] as a chemist, not a physician. His remedy was a preparation of iodine, to be administered through the mouth. He called the medicine a periodate and made some experiments upon patients in one of the cholera hospitals in Hamburg. His remedy, however, was not favorably entertained by the medical authorities in charge of the cholera patients, and whatever claims were reported came through the interest of a friendly correspondent of one of the Hamburg weekly secular papers. To show how misleading some of our supposedly authentic information often is, it is only necessary for me to refer to the report given in the "Year Book of Medical Progress" published in Philadelphia. Of all the progress made, of all the combined investigations during the entire epidemic of cholera throughout Europe in 1892, and there was an immense amount of original investigation and great effort made to discover a remedy, the curious spectacle in the Year Book, which alone refers to the remedies brought by an agent of a syndicate from London to Hamburg at the closing of the epidemic of cholera, shows that there are some things in our profoundest medical publications that are to be taken *cum grano salis*. [illegible] was extensively used hypodermically for its alleged influence upon the secretions of the kidneys, upon the ground that the kidneys were to be aided by irritating them to greater functional activity to eliminate morbid elements through the urine. The result of many investigations recorded in Russian practice show that this drug is not to be commended. Digitalis was used, supposedly to benefit a weak heart. This remedy, if at all useful, could be little more than palliative. The use of acidulated water was extensively employed in different hospitals in Europe as a drink, but not prescribed as a remedy. The water was acidulated with HCl and H_2SO_4. Subcutaneous injections of salt water were made. The proportion of salt was one-half of 1 per cent., and the amount of salt water injected subcutaneously was sometimes as much as a quart at a single injection. In one instance, during an illness of several days, as much as thirteen quarts was subcutaneously injected into the cellular tissue, principally that of the abdominal wall. This process of subcutaneous injection was known as hypodermaclysis. The purpose of the hypodermaclysis was to maintain the volume of the blood. The diminished volume of the blood is directly the result of the waste of its liquid portion or serum into the alimentary canal. In this serous discharge, flakes of intestinal mucous gave the name of "rice-water discharges" to the bowel evacuations, the particles having a resemblance to grains of rice The general inflammatory state of the intestinal mucous membrane, throughout its entirety, drains the blood of its liquid portion rapidly, and collapse due to stagnation of circulation quickly ensues

The remedies mentioned are only a portion of those tried, but there is no living advocate who today can point with unerring certainty to one single organic or inorganic substance, howsoever administered, that can be safely depended upon in the treatment of Asiatic cholera Both botany and mineralogy have been searched in vain for a cure for this disease

The cause of this disease is perhaps accurately stated to be due to invasion of the blood and, secondarily, of all the tissues of the living organism, by toxins or ptomaines, which originate in the upper portion of the small intestine at the early stages of cholera These products of organic activity, whether of animal or vegetable organisms it is here unnecessary to debate, but these noxious products enter the circulation through the villi of the intestine and rapidly and desperately poison the blood It is clearly proved that the disease is the result of general blood poisoning from an intestinal origin Whatever the chemic nature of the poison may ultimately be found to be, may be safely left to the bacteriologic laboratory The practical and intensely important part that remains for physicians seeking to cure patients in times of this disease is to realize how much, as well as how little, it is within human power to do The human organism is prostrated by a fierce and deadly poison This poison is in the blood and in the cells of the tissues, and its work of destruction is quickly and effectually accomplished Reflectively, to say nothing of experimental research, it would seem to me that the rational and only course that could be advocated with scientific assurance of relief is to, as far as possible, literally cause to be removed these products which are death-dealing to the body in which they happen to be found Now, in this same reflective mood, think for a moment and try with me to determine whether it is possible in such conditions as produce the symptoms of Asiatic cholera, it is safer to introduce other poisonous products to neutralize the noxious elements in the blood and cells, or whether it is a better process to, without the introduction of additional foreign substances, remove what we already find in the blood To make this proposition clearer, it could be stated in another way, namely, the body is already bearing a crushing burden, shall we add other foreign substances as an additional burden to the load already carried? The principle seems to me to be at fault The principle is the principle of allopathy, but in the light of facts is it a safe principle to follow? It is reasonably scientific to produce in the laboratory, definite results in vessels of glass by the use of fixed reagents, in the organic laboratory of the living body, no such definite results can be demonstrated The vital principle is an entity which enters into the formula and may be represented by the unknown quantity x in algebraic equations Great and laudable efforts have been made to prevent as well as to cure this disease by inoculation

Ferran, of Valencia, Spain, thrilled the world ten years ago with his proposition of a universal cure for this disease His glory was then at its zenith. His fame has long since faded So obnoxious became his proposition to the government of Spain that laws were adopted to suppress Ferran's cholera inoculations

A worthy colleague and laborious investigator, Professor Haffkin, of Pasteur Laboratory fame, proposed a modified inoculation for the prevention and cure of cholera in 1892 A reporter of the New York *Herald* was inoculated at the Pasteur Institute, and with credentials sent to expose himself to Asiatic cholera at Hamburg in September, 1892 The same reporter had been similarly inoculated by Ferran in 1886 and had the courage to make further exploits in behalf of his newspaper, at Hamburg A very widespread opinion prevails in America that the exploit of the New York *Herald* reporter during the ten days' stay as a nurse in the Hamburg hospital, constitutes a proof of the validity of Haffkin's claim, but the scientific world of Europe knows differently. *En passant*, it may be interesting to state at this place that further experiments have been made by Professor Haffkin in India with the cholera inoculations and, unfortunately for the proposition, reports have recently come to me from reliable medical sources, that a greater percentage are attacked with cholera who have been previously inoculated than of those who have not been inoculated. This subject of prevention, however, is to be discussed by me in a paper to be read before the Section on State Medicine

The result of prolonged reflection, covering many years, and the observations resulting from personal experience in the cholera epidemic in Europe of 1892, is the conviction that there is provided in the laboratory of the universe a remedy which surpasses the results of human ingenuity as much as does the sun surpass in brilliancy the light of the artificial lamp The all-pervading and all-wide remedy, the greatest product of omniscient nature's laboratory, which alone can cope with this pestilential disease of the human race, is nothing more and nothing less than the unmatched, unmatchable H_2O Pure water is absolutely the only trustworthy cure for cholera, and if it came at a great price it would probably be more greatly valued The human organism is so constituted that if it is assisted by H_2O, every morbid element may be eliminated out of its domain The acutely poisoned body quickly recovers its equilibrium and its harmony of action as soon as the processes of elimination can remove the invading poison In the construction of the mucous lining of all the accessible cavities and channels it is prepared by an undiscernible law to successfully resist the entrance of every form of organism The products of organic action alone are able to pass into the blood If sufficient quantities of pure water, of a suitable temperature, are introduced into the body through the natural channels, it is actually possible to wash morbid products as well as organic form of life, out of the human body The mouth gives entrance to the causative germs in Asiatic cholera That is quite conclusively established The locality of the development and formation of the toxin in the earlier stages is determined to be in the upper end of the small intestine, and from experience, as well as from the powers of reflective analogy, there is no doubt that the system can be saved from death if the morbid entity, the germ, is literally deluged away from the alimentary canal by the copious use of a remedy that can not be of the slightest danger to the victim The amount of water to be used varies in different cases It is impossible to use too much it is possible to use too little From the earliest moment that the patient is seen the propositions should be first wash the whole alimentary canal with pure water wash the lower portion by introducing irrigations of warm soapsuds or merely warm water into the colon sufficiently frequently and sufficient in quantity to cleanse that portion of the bowel effectually The frequency of washing that portion of the bowel which is accessible from the rectum should be one or two or three or four times a day according to circumstances At the same time from one to ten quarts of warm pure water mildly medicated with peroxide of hydrogen or hydrozone should be administered at regular intervals during the day as the prescribed remedy by the mouth If the patient vomits very well Immediately reintroduce the quantity of water that was vomited No harm can be done in any case and if it is possible to save life it is possible to save it through this method It is the quickest and the surest method of exciting the activity of the kidneys, and is the safest It is the rational and effective measure for maintaining the volume of the blood It is the scientific process by which to establish cutaneous circulation in the capillaries

The use of simple and useful hygienic measures are the same as in other prostrating diseases Patients should be fed with regularity at not too frequent intervals, giving the proper time, between administrations of simple food for its digestion The use of appliances for maintaining the heat of the body are not to be neglected

The precise details of the method of treatment indicated at this time will be forthcoming in a subsequent paper

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DISCUSSION

Dr Hollister—I found, during an experience of treating cholera in at least four marked invasions in this country, long before I knew anything of germicidal effect, that there were two substances which in my own hands were very satisfactory The one was that of the vegetable in solution, tannin mixture, and the other the stimulating influences of cinnamon These were reinforced by copious injections of water, and drinking also moderately strong infusions of cinnamon tea, a matter that seemed to be of decided benefit to my patients, with the injections of large quantities of water holding tannin in solution It has only been within three or four years that I have come across the fact that either of these remedies is markedly germicidal upon the bacilli This has been stated by several of the experimenters in connection with the treatment in Germany during the ravages of the cholera there While water is of use in washing the alimentary canal, if we have these germicidal remedies it seems to me that the water treatment alone is not only necessary, but that we should also obtain the benefits to be derived from the others In the irritated conditions of the alimentary canal, in infants, the remedies used seemed to me thirty years ago to have a peculiar effect in reducing the irritations

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LEUCOCYTES AND NUCLEINS

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md, May 7-10 1895

BY T O SUMMERS, M D

ST LOUIS, MO

I believe that St Luke was the only physician upon the Apostolic Board, and that he is the generally accredited author of the Acts of the Apostles, in which describing the visit of St Paul to Athens he declares parenthetically this very remarkable historic note

"For all the Athenians and the strangers that were there spend their time in nothing else but either to tell or to hear some new thing" And this graphic [illegible] in which the great Apostle of the Gentiles has given as an historic character to the 'City of the Violet Crown' has descended unto us of later days and it may be said with truth that among all the workers in the great field of science medical men are most eager for discovery and most earnest [illegible] for the ever unfolding mysteries of truth And notwithstanding the fact that this spirit of investigation has often been held up to us by those [illegible] by our labors and yet are ever ready to [illegible] methods as the [illegible] it will [illegible] end day in the history of medicine [illegible] to "hear or to tell some new thing"

It is to a new departure in therapeutics, developed by recent investigation that I direct your attention in this paper There is nothing which has so distinctively characterized the trend of modern therapeutics and separated it from the empirical methods of the past which has crowded our materia medica with vast masses of useless rubbish as the contribution of physiologic products to the control of disease It is strange that we have moved so long in the fast light of physiologic discovery, thrown upon us by the microscope, the spectroscope, and the many [illegible] apparatus which makes our laboratories more wonderful to the untutored mind than were ever the alembics of alchemy to minds of romance and superstition, it is passing strange, I say, that we have so long overlooked the very principles upon which alone a scientific system of therapeutics could ever be established—the functional relations of the cellular elements of the organism

As long ago as that stormy time in the history of the British Association when the Thompson Tyndall prayer test was convulsing the religious and scientific world, a no less interesting discussion grew out of that contest upon the subject of spontaneous generation So strong was the antagonism developed, that it affected even the terminology of physiology Dr Lionel S Beale, the recognized champion of the "orthodox" party, clinging to the principle of 'vital force,' and giving to the blastema of the ultimate physiologic unit of the organism the name of bioplasm, while Professor Huxley gave the name of protoplasm to that which he and all of his school recognized as the physical basis of life Nothing then was known of the exact structural and functional character and relations of this peculiar cell substance, which appeared to act so differently under conditions apparently the same It remained for later physiologists to show just what part this ultimate vitalized material played in the great drama of physiology It was found that both these great scientists were correct, but viewing this cell-blastema under different conditions, their definitions differed accordingly, yet led up to the same result as in the case of Copernicus and Ptolemy, or to speak poetically

> "Like that target discussed by the travelers of old
> Which to one appeared argent, to one appeared gold,
> To him ever lingering on doubt's dizzy margent
> Appeared in one moment both golden and argent"

The first step in what may be called the new physiologic system was taken, when with the improved mechanism of the microscope, it was demonstrated that of the two kinds of corpuscles which float in the plasma of the blood, the larger or white corpuscle, the leucocyte, was in every respect a perfect cell, possessed of a cell wall, which Dr Beale distinguished as "formed material," a blastema or plasmic granular substance, in which floats a body called the nucleus How many of these may be thus involuted can no more be estimated than can the problems of time and space be solved by the finite mind

The next step toward establishing our new physiologic system, was taken when the leucocyte was found to be the real unit of the organism, the agent through which all nutrition is accomplished Up to a very recent date, it was believed that all the nutritious material which had been operated upon by the digestive agents, passed directly into the general current of the circulation, floating freely in the plasma of the blood till it reached the capillaries, and then by a reversed osmotic process was taken up by the individual tissue cells, only that part being taken up by them which was necessary to the support of that structure represented by the cell, and the rest passing on in like manner to the other structures until all parts of the organism were nourished

The red corpuscle was recognized as the oxygen carrier of the system, and the eliminator of carbonic acid, but neither the origin nor the function of the white corpuscle was in the least understood by even the most skillful observers Later investigations, however, proved the identity of the leucocyte with the lymph corpuscle, which was itself supposed to possess as the simplest original cell, metabolic functions This gave a new importance to the leucocyte, and when to this was added the recognition of the pus corpuscle in retrograde metamorphosis, as nothing more nor less than leucocyte under altered conditions, it was not long before its true significance as the real tissue-builder of the organism was fully established A peculiar movement of the leucocyte as it goes along through the current of the blood, had long been noticed, called on account of its resemblance to that of the amœba, the lowest form of animal life, the amœboid movement, by which it changed its form apparently at will, becoming often so elongated and slender that it slipped through the walls of the blood vessels and held high carnival in the surrounding tissues All this pointed to some mysterious power or function as yet unrevealed to the eye of the physiologist A closer study of its morphologic characteristics proved that there were several forms of leucocytes, differing in the number of nuclei which they possessed The simplest, those having but one nucleus, were called mononuclear, those possessing two or more nuclei, were called multi- or polynuclear leucocytes In these it was seen that the amœboid movement was most active Vierordt, who has made the most accurate observations upon the blood, of any other physiologist, perhaps, found the numerical relation of the leucocytes to the red corpuscles to be in health in the ratio of 1 to 671

Now, we are prepared to understand the next step in the functional history of the leucocyte These bodies differing in size, shape, and number of nuclei, were observed to swell up and burst, pouring out a plasmic granular mass, which appeared to be in a state of active molecular vibration The nuclei came forth from the breach in the cell wall with some of this blastema hanging closely around it, while the rest of the blastema, with the ruptured cell wall, floated off in the blood current Where there were two or more nuclei, each one became rapidly a perfect cell with its nucleus and nucleolus, and in this way was established a great increase in the number of leucocytes This process of cell proliferation, it will be seen, lies at the foundation of all nutrition The next phenomenon observed was what might rationally have been expected to be established—the taking up by the leucocytes of the proteids which are delivered to the blood by the absorbents after digestion is complete

As soon as these proteids get within the walls of the blood vessels, they are immediately attacked by the leucocytes and taken into their cell walls by that osmotic process which is the basis of all physical action in the organism Mingling with the blastema of the leucocyte, these proteids become suffused as it were, with a certain molecular activity imparted to it through the influence of the nucleus, something like that observed when an electric current renders nascent certain chemic agents that without it are negative or inactive It is this vitalized pabulum to which physiologists have given the name of nuclein

The next step in physiologic evolution is the appropriation of this pabulum by the individual tissue cells of the body as it passes through the capillaries And here it must be noted that no assimilation of any nutritive substance (except of inorganic origin, as water, etc), can take place through any medium but that of nuclein, and it is in the multinuclear form of leucocytes that we find it developed It has long been known to physiologists, but its wonderful place in the economy of the organism was never known until the close study of the leucocyte developed its origin and function, and in this way cleared up some of the most hidden mysteries of the organism, and placed in the hands of the therapist, the most wonderful agent of therapeutic power yet known to scientific medicine

To return to our panorama of nutrition Seeing then the proteids must all report to the leucocyte and be stamped with this nuclear influence before delivery to the several tissues, the bursting of the leucocyte is readily understood, for by this means the nuclei are set free to become new cells, and a great quantity of this cellulized tissue pabulum is poured out into the circulation, bathing with food every hungry cell of the several tissues through which it floats, each cell taking up that which is necessary to its molecular activity and returning to the current that which belongs to other and remote tissues of the organism This conversion into tissue through the circulatory system, of material lifeless in itself, is the most wonderful phenomenon presented to the human mind We can not explain the affinities by which certain kinds of pabulum are accepted and others rejected by the several tissue cells of the body, any more than we can explain the affinities between the sexes, often so seemingly astounding We know this, however, that the change which goes on is the elaboration of a vitalized or cellulized substance, which is capable of entering at once into tissue as soon as it meets the various cells which have this power of elective assimilation This primal cellulized pabulum has, therefore, been appropriately called nuclein, from the mode of its generation, and when operated on by the individual tissue cell it becomes proto nuclein, after the analogy of Professor Huxley's nomenclature, which represented its real origin This substance is rich in phosphorus, and has been separated in active form from the lymphoid structures of the body, as we shall see later

We are brought now face to face with one of the most formidable problems of physiology, the solution of which will destroy many of our old pathologic ideas upon which so many therapeutic systems have been wrecked Up to a very recent date in the history of pathology, leucocythemia was considered a specific disease Upon the *post hoc, ergo propter hoc* principle of medical philosophy, the rush of leucocytes to any point of irritation was regarded as a feature, or even a distinct stage of the disease How vividly can the memory of some of you recall the old professional saws, as they were called by those of us who sat at the feet of the Gamaliels of those days among which there was none more familiar than the *ubi irritatio ibi fluxus* We answered almost all our questions upon inflammation with this single axiom, as we believed it Often have I heard the venerable Gross straighten his lofty form and declare in a stentorian voice that inflammation consisted, pathologically of the rapid afflux of leucocytes! How startled would he be to learn that modern physiology has demonstrated that this rapid afflux was Nature's reinforcing battalions! Every white blood corpuscle that gathered about that point of irritation bore with it the materials of repair and as still later investigation has proved also the power of overwhelming toxic germs, themselves in their incipiency, and protecting the organism against their poisonous and deadly exudations

As to the phagocytic action or cell eating power of the leucocytes, which has been strongly claimed by some observers and as strenuously denied by others, it is, after all, a mere question of difference in the manner of destroying toxic germs, which has developed antagonism among physiologic observers It is, as I have upon a previous occasion already remarked not at all necessary that because the physiologic or pathologic function of one cell is lost in that of another, we should, in speaking of such action as a phagocytic or cell eating process, imagine a mouth and teeth and all the paraphernalia of mastication, deglutition, etc The result is the same, whether the pathologic germ is swallowed, destroyed or neutralized, so long as the cellular influence of the leucocyte is the agent which accomplishes this, it is immaterial whether we use the term "phagocytic" literally or metaphorically, but notwithstanding all the adverse criticisms of the word as used in this connection, there is none given us which more emphatically expresses the idea we wish to convey, the difficulty of nomenclature is too great to lightly reject so expressive a word which as bacteriologists and morphologists all admit, does certainly most vividly express the primordial condition of which this is the physiologic analogue In its last analysis, after all, it is the molecular disturbance produced in the germ that deprives it of its toxic power This we know will effect even chemic action Upon this, all fermentative processes depend

Isomerism is another example of the effect of molecular arrangement or disarrangement Where can you find two substances more distinctly different than sugar and gum arabic, and yet they are exactly the same in composition and in the proportion of elementary combination, the difference in arrangement of the molecules being sufficient to account for the difference in chemic and physical properties With these examples before us and I could, if time permitted bring out many others equally as striking, it is very easy to see how the slightest disturbance of molecular arrangement in any germ will deprive it of its specific character and by investing it with certain cellular elements emasculate the most deadly of toxic bacilli and send them harmless through the blood currents of the organism Having therefore, found that it is within the leucocyte that all proteine material is developed, that upon the proliferation of the leucocyte all assimilation depends it is but a step further to establish the action of the leucocyte in resisting the effect of toxic germs as well as divesting them directly of toxic power It would perhaps be more accurate to define this action as a supporting of the elementary structures of the body to such an extent that they are capable of themselves to overcome the pathologic influences which are being continually introduced into the organism To those whose daily experience brings them face to face with the awful side of human life, I think I can appeal with emphasis, when I state that there is scarcely a breath we breathe, or a drop we drink, or a morsel we eat, that is not charged with the germs of deadly disease, and if there were not in our organism a distinct provision made for the resistance of such germs to use a Pauline expression, we should "die daily" When the tocsin of disease is sounded through the organism, it is the rushing of the leucocytes that constitutes the first physiologic response to directly resist a toxic agent, or supply the structure attacked with material for nutrition or repair in case of lesion And yet there are still those among the ranks of intelligent practitioners who consider the increase of leucocytes as an element or phase of disease itself, instead of nature's effort to support her crumbling battlements At this stage of my argument, I shall, upon the strength of what may be microscopically demonstrated to be the function of the nuclein charged leucocyte, make an assertion which, I have no doubt, will be considered perhaps too arbitrary It is, that whatever of so called specific effect lies in the antitoxin obtained from the immunized animal, as opposed to the bacillus and the toxin of diphtheria, is accomplished by the excitement of leucocytosis and, after all, the end is reached by the same physiologic process

The ultimate aim of all antitoxic agents must be overwhelming of the toxic element of the germ, and this can only be accomplished by a great excess of physiologic tissue building material Let us observe the process by which this antitoxic effect is brought about In the first place, the physiologic relation of proto nuclein would, naturally, preclude the idea of its action as a direct specific antidote to a specific poison such as that observed between chemic agents, or even physiologic antagonists, as for instance, the hydrated sesquioxide of iron against arsenic, or atropia against morphia, or chloroform against strychnia Were this the principle of the functional activity of proto-nuclein, its therapeutic range would be limited to such an antagonism, but I am prepared to show, by careful experimental records, its effect is first observed when the system has been thoroughly charged with it, thus preventing the expression of the toxic agent by a preoccupation of the nutritive field, and an investment of the attacking germ I have often noticed a leucocyte thoroughly charged with original nuclein adhere to the cell of a sarcoma, and after bursting itself, send the round cell floating away in the field crenated and almost emptied of its contents Such effects have been observed also upon the blood after days of treatment with proto-nuclein This appears to me to be the very *ultima thule* of therapy, and the question will be, has been, very naturally asked after such developments "If such be the power of a substance capable of investing, controlling and overwhelming toxic agents, where is the limit to its action?" If I spoke the truth boldly, as it should be spoken, I should answer that, properly applied, I can see no limit to its resisting power When, side by side with my own experiments, I have observed what I admit to be the wonderful effects of antitoxin in the organism of the bacillus and toxin of diphtheria, I have nevertheless felt that proto-nuclein was as far superior to it in pathologic results, as the whole realm of pathology is greater than a single disease

And now we come to the question of practical interest to the general profession, How is it possible to extract this delicate substance from the animal tissues? and its corollary, What are the methods used to preserve its cellular activity?

There are three forms of nuclein material now before the profession 1, nuclein made from yeast, 2, another preparation of nuclein has been prepared which is taken from the animal organism by chemic methods, prepared in tablet form for internal use I am not aware that this form has ever been prepared in solution for hypodermic use, 3, the third form of proto-nuclein is a product taken directly from the lymphoid tissues of the healthy animal, the thyroid and thymus glands, the brain substance within the area in and about the corpora quadrigemina, the pituitary body and pineal gland, the pancreas, spleen and liver No chemicals are used in this process, the methods of extraction being purely physical, and the proto-nuclein is kept active by an investment of gum benzoin and milk sugar which preserves it indefinitely, just as the germ of a grain of corn is kept potentially active by its environment The activity of the proto-nuclein may be easily shown by dissolving some of the powder in distilled water After the sediment has settled, draw off the supernatant fluid and apply a drop of it to a drop of freshly drawn blood You will see a most beautiful physiologic panorama, instantaneous photographs of which I have here for your inspection Proto-nuclein is richer in nitrogen than the ordinary nuclein of the text-books Its formula, as far as it is possible to be chemically accurate in quantitative analysis, is $C_{29} H_{49} N_{10} P_5 O_{32}$ differing by about one equivalent of nitrogen It will be noted how rich in phosphorus this wonderful physiologic agent is

So much, therefore, for its preparation and extraction The most important factor in the problem is the answer to the questions, What will it do? What can it cure? What will it prevent? in the great battle between science and death Were I to give free range to my own confidence in the therapeutic power and range of proto-nuclein as observed from day to day for the last six months, under the most favorable circumstances and under the direction of experienced and authoritative clinicians, you would discredit even the demonstrations of this report But if you will consider for a moment what a sweeping therapeutic power must belong to any agent which is the normal tissue builder of the organism and the direct antagonist of its invading toxic germs, you will see how difficult it is to limit its indication as a therapeutic agent Its most pronounced results have been observed in tuberculosis, sarcoma, neurasthenia, tonsillitis and la grippe In such cases it has shown a most wonderful power In the hospitals of New York it has been used with general success in the following diseases, beside those already mentioned diphtheria, neurasthenia, pernicious anemia, general marasmus and other cachectic disorders, fevers, etc As to its dose and mode of administration, I subjoin to this paper full directions which have been carefully prepared from the closest clinical observations

Nothing has been left undone to thoroughly test the practical truth of what has been theoretically claimed as a therapeutic power I believe with others even more conservative and less sanguine than I, that it will mark an era in therapeutics Such relationship between the pabulum and the individual tissue cell of the various structures of the body, seems to be the very last analysis of function in the human organism We approach, as it were, the very *Shekinah* of physiology Up to the time when therapy began to look to physiology for help, our whole system was a vast accumulation of clinical reports without one iota of determining philosophy—a vast labyrinth without an Ariadne thread to guide the returning footsteps of our reason ' I doubt not that before the close of the nineteenth century, our therapists will look back upon the thousands of agents vaunted in the cure of disease, as the modern soldier gazes upon the spear and shield of ancient Greece and Rome The simplification of physiologic methods has been followed most naturally by the use of those physiologic principles of therapy upon which the normal curative conditions of the organism depend, and without which no scientific system of therapeutics could ever be formulated

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THE PHYSICIAN OF THE PAST, THE PRESENT AND THE FUTURE—A DEFINITION OF HIS SOCIAL POSITION

Read in the Section on Practice of Medicine, at the Forty sixth Annual Meeting of the American Medical Association, at Baltimore, Md , May 7-10, 1895

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BELLEVILLE ILL

In this age of progress, when we behold a constant race for new discoveries in medicine and surgery, when nearly every day brings new surprises, it may not be amiss to pause and take a glance at our profession from a different point of view May be we will discover that it needs a little attention in another direction I admire every diligent worker, every untiring student But with all this, the nobility of our profession must stand foremost Our calling is not a business alone, neither honor nor the desire for dollars and cents alone are at stake It is an exalted vocation The unsullied social position of the physician should tower high above his other achievements.

THE PHYSICIAN OF THE PAST.

It is only for the purpose of introduction that I will dwell as concisely as possible on the history of medicine, and the physician of the past. Some historians, among others Daniel LeClerc, have traced it into the remotest ages, as far back as twenty-eight hundred years before the Trojan war. The most of it is mythical, and it would be a waste of time from a medical point of view to analyze the fables of the ancients. Whatever was known to the ancients of medicine rested in the hands of their [illegible] gods and priests.

No doubt that at all times there was disease and suffering and that attempts at healing were made. The Bible throws no light on the subject of regular practitioners of medicine and [illegible] among the [illegible]. If we look around among their contemporaries, we find the Aryans prominent. They inhabited for many centuries as a compact nation the [illegible] plains [illegible] the highlands of middle Asia. Like the history of nearly all ancient people, theirs is transmitted to us through their religious and their war hymns. They possessed no other literature. Their songs and prayers reveal to us their dangers, their pleasures, their wishes, their joys, their ills, their knowledge and their ignorance. In the collection of their hymns, the "Rig Veda," they implore the gods for help in sickness—not one special god—they name several, but most frequently the [illegible] god Aswin. Eventually, in one of their songs the word physician appears. They sing: "Our wishes are many, the charcoal burner wants wood, the priests gifts, the physician, patients." This shows for the first time in the history of medicine a distinct recognition of the physician and the separation of that science from the office of priest. Magic is also mentioned as a healing power in the "Atharva Veda."

There is no doubt about the existence of the Egyptian priest physicians. While the divine mission of Moses will not be questioned, nevertheless his knowledge of medicine and hygiene was obtained in the land of the Pharaohs.

The Phœnicians must certainly have had their physicians, and without the existence of some medical literature before Hippocrates it would have been impossible for him to have left us so much information that, even in these advanced times, is of incalculable value and benefit to the profession.

Prior to Hippocrates, schools of medicine existed at Kos, Knidos, Rhodes, Kroton and Kyrene, and however primitive and imperfect they may have been, we must consider them as pioneers. With Hippocrates began a new era. What had been up to his time a mass of blind mystic empiricism, mostly in the hands of the priesthood, was by him for the first time in history, converted into a system, and when we consider the limited resources at his command it is wonderful how perfect he has made it. For centuries it was the only guide, and Galen who lived in the year 131, Celsus and others, down to Avicenna in 980, notwithstanding their renown, and the great works they too have left, were unable to add much to it. At last Paracelsus, in about the year 1500 introduced chemistry into medicine and thereby changed the whole system. About the year 1520 he destroyed by fire publicly, in the city of Basel, all the works of Galen and Avicenna indicating the final closing of the ancient methods of medical practice.

How much valuable medical history was destroyed at Alexandria by the fanatical Moslems will remain unknown to us forever. [illegible] after Paracelsus, medicine was not looked upon as an independent scientific system. The church which monopolized all branches of science was very slow in granting it freedom and the students of the days in Sweden and other continental countries were compelled to take a course of medicine as late as the beginning of the present century.

During the Middle Ages the study of medicine together with the other natural sciences rested for centuries in the hands of the priests, and [illegible] were better versed in these branches than [illegible]. Students at the centers of learning in those days devoted nearly their whole life time to the mastering of all sciences, so much so that in course of time, it resulted, one had to be adapted, [illegible]. [illegible] 1200 the poet and [illegible] gave [illegible] utterance to his feelings in the following [illegible] words: [illegible]

Later on the practice of medicine, especially surgery, was by a decree of Pope [illegible] forever prohibited in the following manner, [illegible] by Pope Innocent III in the General Council of Lateran: "[illegible] Subdiaconus, Diaconus [illegible] [illegible]."

Regular physicians and surgeons had to fight their way against many obstacles to bring about the emancipation of the profession. At best the practice of medicine during the three hundred years preceding the present century was a mixture of science, theology, astrology, magic, witchcraft, superstition, spiritualism and a mass of other indescribable isms. It was empirical to a great extent. The last fifty years must be credited with having given to the world the exact sciences of medicine and surgery, and their emancipation has been completed.

We, their disciples, should rejoice to have lived to see this. With gratitude we should look back to the giants in our art who have preceded us. Imagine the clouds of darkness with which they were surrounded, often frustrating their best endeavors. Let us admire their diligence in delivering to us their literature without the assistance of the printing press. Let us give credit to those that preserved it for us during the Middle Ages, often miscalled the Dark Ages. Let us turn with reverence and admiration to the industrious monk in his lonely cell, through whose midnight labor we have had preserved to us the manuscripts of the ancients.

What would have been left to us if he had not saved those treasures from the destroying hordes of Alaric and Attilla, the Gaul and the Saracen, in whose invasion of the then civilized Europe, the lifework of the sage perished with the handiwork of the peasant.

We are prone to censure these pioneers of science, but it is questionable, whether our most learned contemporaries could have done more for medicine and surgery than those persecuted scholars of ancient days.

ooking over the history of Rome, we find that days produce the same impostors as lived dur- the Roman Empire Notwithstanding the hings of Hippocrates and Galen, the special ling gods were appealed to by the best and most ned of those days There was a continual pil- nage to the temple of Petosiris, for astrological ice in sickness, regarding which Juvenal ironic- exclaims as follows "*Capiendo nulla videtur or hora cibo, nisi quam dederit Petosiris*"

hat difference is there between this and the lern Christian science healer, and kindred hum- s?

THE PHYSICIAN OF THE PRESENT

ut let us consider the obstacles surrounding the sician in our days Quackery will never die The ian medicine man of the forests of undiscovered erica, with his invocations and posturings, has changed his name and garb and is with us now the nineteenth century, stealing his way as a istian science healer or sophist of some kind, all classes of society, into the hovel of the ig- ant poor and the palace of the rich and apparently cated The quack and his victim will live for- Ignorance and dishonesty will always seek the o, the mysterious and the superstitious It seems ossible to educate the masses into an understand- and appreciation of the unerring laws of nature physician of to-day and of the future will have same never-ending contention with charlatanism ignorance

come now to consider the position of the physi- of the present Medicine and surgery are rec- ized by the entire civilized world as independent nces, and we, their disciples being intrusted with care and application have assumed, as the phy- ins of the present day in this immense field, the test of obligations and responsibilities We e at our command the whole earth and its sur- ndings, and have the right to press all into our ices, but with these rights are manifold duties ch I shall attempt to enumerate in part

he duties of the physician to himself, his patients, his fellow-practitioners, are well laid down in rules and regulations adopted by this Associa- many years ago, and they come as near perfec- as any set of laws known to me For the pur- of brevity I will not dwell on them, but will at come to the consideration of the duties of the sician in regard to some of the great social ques- s of the day

may be asked, What has the physician to do with great social questions? I answer, His relations uch questions place him on a footing equal to, if above, that of the spiritual advisor No one es in daily contact oftener with his fellow-men n he He is their firm friend and recognized supe- in matters pertaining to a knowledge of na- and her laws, which he is in duty bound to mulgate every day When the great Creator he universe made laws, in silent obedience to ch the stars and heavenly bodies move, laws ch all nature obeys, he formulated a code of law, ch even man, the prince of creation must obey

ut I hear the question, Is not this the province he church and State? I answer, yes They have r part to perform, but whether or not they do r duty is a question about which there is grave doubt Looking at the State and the enforcement of its laws by the courts, it is apparent to every thinking man that it falls far short of performing its great duty As to the church it seems to have lost its hold on mankind to a large extent Self-styled evangelists travel through the land, seeking by preference the large cities Their discourses are sensational, for their hearers love sensation After a season of pretended exhortation, and addresses made to men only, they shake the dust of the city from their feet and depart, their pockets well filled, leaving behind them only a cloud of smoke The churches are turned into club-houses, sweet songs, sweet music, (of a nature mostly unsuited to the worship of the Creator), mouth preaching is all that remains, and only the dance is lacking to make the entertainment complete The masses of to day want entertainment It does not matter what is given them They are ready to applaud Ingersoll to day, the traveling religious mountebank tomorrow, and Barnum's show the next day It is only a modified repetition of the cry of *civis* and *plebs Romanorum*, during the declining period of that mighty empire, "*Panem et Circenes*"

The honest pastor who educates the youth of the land in morality, in order to make good men and women of them, is at a discount Church dignitaries, high and low, quarrel among themselves to the detriment of their flocks If any one doubts the poor outlook for help to mankind from the church, let him cast a retrospective glance at the monumental farce of the present century, the Religious Parliament, held at Chicago during the World's Fair Unless the spirit of a Peter Cartwright, Marquette, Father de Smet, Prince Galitzin or others, of like character reappear, not much can be expected Not even the last resource of the masses, the salvation army, will avail

Let the doctor, the emancipated physician of the nineteenth century, with a grateful heart do *his* duty

I say the physician must take a firm stand on all social questions When he is girded with the armor of the never-erring laws of nature, he is ready to fearlessly take up the gauntlet against any antagonist Let me begin with the laws of the propagation of the race It is not the purpose of this paper to give a dissertation on them, they are prescribed by God, the church and the State That which comes within the province of the physician is of a twofold character On the one hand, he is called on to remove physical obstructions which stand in their way, but oftener, in our days, he is called upon to interfere with the laws of nature The first one belongs to one of the proudest duties of his profession, the other is the offspring of Satan and alike detestable and abhorrent

The duty of the physician upon being consulted by the moral leper who would prostitute the noble science of medicine and surgery to the foul purposes of such wretches is plain He should stamp upon such intention and prevent by all means in his power the consummation of the greatest crime against nature Procreation impregnates all nature and all natural laws, and a society which tolerates the violation of these natural laws deserves the fate of a Sodom and Gomorrah

About three years ago, a number of so-called learned people held a convention in the city of Detroit, Mich, in which the subject of interference and prevention was discussed by some male and female physicians there assembled, and the disgraceful spectacle was presented of a large advocacy of these unnatural and abhorrent methods There was only wanting the presence of the majesty of hell to furnish the diabolical perfume befitting such a discussion Let no reputable physician soil his hands and disgrace his profession for filthy lucre These foul practices once taking a firm hold on society destroy mankind, womanhood, the family and the State The history of the world is filled with the proofs of their dire results A once powerful prominent nation of Europe, where the system began about one hundred years ago, goes begging to-day for a ruler and the end of it has not yet come I deem it to be the highest duty of the true physician to destroy all literature aiding the practice, whether called by their true names or under the delusive title of tokology, etc Such literature is properly called "Satan in society"

But enough, let us proceed to a further branch of our inquiry What is the duty of the true physician regarding the question of the emancipation of woman?

Man has his place in the world, so has woman, and nature has drawn the line Man should be the protector of woman In all the *ancient* nations, which can be held up as an example, the Jewish nation seems to have taken the proper stand *There* the woman was conceded the place belonging to her Christianity has done the same thing somewhat improved, but step outside the boundaries of Christendom and the woman is found to be a slave Physicians should unite against the modern false emancipation of woman, for they know it is a *perversion* of nature Protect the woman, give her a chance to sustain herself honorably when those to whom she has a right to look for sustenance neglect to do it but do not delude her and assist her in the belief that she is man's physical equal Put her *on the* same footing with man, with full fledged rights and privileges, let her contest on a physical *plane* with man, to sustain herself, what will become of her? The physician must know the ills and evils that will beset her There have been and there still are, very many great women who will forever shine in history, empresses, queens and others in all stations of life, among them the sisters of charity, the physician's best friend and helper There were the brave women of Saragossa, and our own great American women of the wars of independence and of our late war for the Union I doubt if all these great and good women would join in the cry for woman's emancipation in the modern sense The physician should be the daily teacher to refute the falsehood for the sake of woman The physician can never approve of the perversion of the laws of nature, and it is believed that such laws stand forever as a barrier to the attainment by woman of that equality so much desired by the agitation of the present generation

And now the liquor question Wines and liquors are the gifts and products of nature, then why make war on them, instead of upon their abuse? The physician needs them He knows the genuine from the adulterated, by virtue of his knowledge of chemistry and pharmacy Prohibit a legal traffic in wines and liquors, and the physician, his patient and the public in general are at the mercy of the smuggler The physician should advocate laws for inspection of food and drink He should see to it that these absolute necessities of mankind are pure He should never lend his aid to the enactment of prohibitory laws because they are unnatural Nature gave to man the earth and its contents for his use, but not for its abuse God created man to be like him not to be muzzled like a wild beast, to prevent him from harming himself with his Creator's gifts A godlike man in chains, guarded against himself, protected by law and force from his own acts, presupposes that he is affected with a species of insanity, which requires confinement and curtailment of liberty Physicians, the students of nature, can not sanction laws so unnatural If the teachers of mankind have neglected their business do not help them to patch up their work with nostrums but as true helpers of mankind point the way to obedience to those natural laws by which mankind must ever be governed The physician should be found on the side of sound reason, performing his duties regardless of the cries of fanatics or the claims of quacks

These are some of the more important duties of the physician, considered with reference to his social position Time forbids a discussion of the numerous minor duties

I do not wish to be understood as advocating that the physician should seek controversies on the subject of his duties His duties are of such a nature that they *do not admit of public discussion*, except with and by physicians The nature of his duties reaching as they do into the privacy of the home, preclude particular open discussion, and permit but of a general application when presented for public inspection

The object of touching on these social questions is to define the position of a physician toward them, as he is above all others the intimate friend as well as helper of the family, the foundation of all human government Intimately connected as he is with the inner life of his patients, he should above all things strive to be in the right, the just and natural side of all matters which come within his sphere

The physician of the nineteenth century must not allow future generations to think of him as narrow and contracted, but history should record him as a man of broad and upright views, a scholar, a sage, whose best thoughts and aspirations were for the advancement of the noble science he had espoused His care for his patients, his thoughtfulness and watchfulness for them requires his most earnest examination of all *their* surroundings and the principles of hygiene and sanitation should receive his closest attention, he must make war on the sins committed against them daily, privately, when he comes in contact with them in the case of his patients, and publicly when his duty as a citizen, having in view the welfare of his fellow-man requires it

Mankind needs much instruction and, considering our boasted learning, it is astonishing how little the principles of hygiene are understood by the masses, how little attention is paid to pure air, pure water, pure food, clean houses and proper ventilation, as medical assistants What a field for the physician, and in a direct line with his work socially! It is wonderful what can be accomplished in this direction by well directed action on the part of the physician, adapting himself by reason of his close relations with his patients, to their needs and wants, he becomes at once the purifier of their minds, their bodies and their houses, a position socially to be envied by all men

THE PHYSICIAN OF THE FUTURE

The first duty of the physician is to sustain himself in the position heretofore described, and to accomplish this he must be equipped with a thorough education The standard of education must be raised It is true that nearly every medical college is proclaiming that necessity, but such proclamations are but as traps for the unwary, and it is expected that by the mere noisy declarations of the necessity they will be credited with having accomplished the fact

Before we can speak of a medical education we must look to the education of the student, and that question solved I have no fears for the professional education When this country was new and there was a demand for physicians, it was quite natural that this demand should be supplied I will utter no word of censure against the medical school of the past The profession of medicine and surgery in our country in the past can boast of a great number of pioneer giants I would name some of them out of respect, but since they are known to the members of the ASSOCIATION I will, for the sake of brevity, deny myself that pleasure We are now, however, on the threshold of another and different period, and this ASSOCIATION must place itself on record as indicating the path which is to be followed in the future This ball, the earth on which we dwell, is growing smaller, figuratively speaking, day by day We are surrounded by a world of intelligent neighbors The oceans that separate us from other continents have lost their terrors We must become the equals of other nations in literature and science, as well as in trade and commerce Can the American physician and surgeon afford to be behind his brother of the old world? Never!

The time when the green country lad, however intelligent and ambitious, or the man advanced in years, can take up books at any time and begin to read law and medicine is past, the education of the professional man of the future must begin early in life At the age of 10 years the boy intended for a professional career must be able to read and write correctly and he must know the rudiments of arithmetic (I am describing now the education of the student in Europe) He has by this time had a glimpse into history and geography At the age of 10 he is removed from the common schools and enters into a higher grade There the study of Latin and one other modern language begins, together with higher mathematics, history, geography, botany (botanical gardens are attached to these schools in many places), zoology, etc By the time this boy is 14 he is a pretty well educated fellow Other studies then follow in still higher graded schools, and other languages are added to his studies until at the age of 17 or 18, our European student, if he has any of the ambition of youth is a highly educated person Give us a young man brought up in this way Give us one who has in addition to that, or in lieu of some of the unnecessary branches, pursued those taught in the manual training schools (called polytechnic schools in Europe), and you have the only student fit to take up a profession

Our future American student of medicine or law will have to be brought up in just this way Hundreds of them pursue this course now One prepared in such a thorough way can accomplish more in two years of professional study than the one not so prepared in four or six, nay even in a lifetime Give us the well-prepared student, and the bogus medical schools will die without legislation, for the want of students I think, in fact, I know, that many of our schools of medicine are good They exhibit an honesty of purpose which is commendable Let the AMERICAN MEDICAL ASSOCIATION assist in furnishing them the proper students Legislation is now pending in several States which will, when perfected, take the entrance examination to medical colleges out of the hands of the college faculties This is a step in the right direction In one of our States this move will be inaugurated in the near future It must only be borne in mind that in this, as in all progressive measures, radicalism is to be avoided The truth once conceived can force its way to a triumphant acknowledgment only by sensible measures Step by step this must be accomplished Step by step, just like the education itself The wisdom of those who are by law empowered to regulate such matters will have to be exercised to its highest degree, and justice and impartiality must form the basis of all their actions

With chemistry and the microscope the study of the germs—histology, physiology, pathology, etc ,, have been revolutionized How is it possible for the future physician to combat the problems of nature and disease, how can he expect to master the study of his profession with a few courses of lectures? It is an absurdity to suppose it It requires a lifetime and a foundation well laid Twenty-five years hence when we observe a physician's sign, we must expect to find a true physician, the pill-peddler with his saddle-bags will only be known in history

The future doctor will have his private laboratory He can not even prescribe for a simple case of rheu matism without a preceding chemic analysis o the excretions of the body The future doctor wil not permit every ambitious manufacturing concern as is customary at the present day, to do his think ing and lull him into the false habit of lazily prescrib ing their stuff The future doctor will not prescrib before his diagnosis is complete He will examin the sputa, the ulcerated throat, in short, everything else, to make sure what he is dealing with Chem istry, the microscope, electricity, and all the power and resources of nature will be pressed into hi service What is done by only the few to-day wil then be the universal practice

Medicine will then, indeed, be a science, a profes sion The man with an 'ism or 'pathy will als vanish He is only the product of ignorance an perverted education Science has no 'isms Fact alone count in science Truth has no barriers, i penetrates everything, and the spirit of truth rule the universe It may be hidden, it may be trample upon, but it will come out victorious in our scienc as in everything else The physician of the futur must follow the truth The laws of nature are hi guide and they will never mislead him Hones study, honest investigation will lead to his individua success and to the honor of his profession Th well-educated and, I hope, the well-bred physicia will be an ornament to society He will be th people's friend and advisor When he enters th house of his patients, or when the inmates of th hospital hear his steps in the corridors there will b rejoicing His very presence will inspire confidenc and hope in them They will willingly submit t his orders and instructions. They will read truth and consolation in his countenance. In return, he will enjoy his vocation. His life, though full of hardships, will bring pleasures that riches can not buy, and when his career on earth is ended and he closes his eyes in that sleep that knows no waking, I am certain that his heart will be at rest. He has indeed faithfully served both God and man.

SOCIETY PROCEEDINGS

Michigan State Medical Society

Thirtieth Annual Meeting, held at Bay City, [illegible]

First Day—Morning Session

The society convened in the Madison Avenue M. E. Church and was called to order by the President, Dr. H. O. Walker, of Detroit.

Prayer was offered by Rev. M. C. Hawks. This was followed by an Address of Welcome by [illegible] T. A. E. Weadock, who trusted the meeting would be one of great intellectual profit to those in attendance. He said that Bay City considers it an honor to entertain such a distinguished body of men. He spoke of the pulpit, the bar and of medicine, holding that they all aimed to uplift mankind. The professions should act together for honorable and honest dealings. He closed his remarks by welcoming the society to the city.

Dr. A. L. Hagadorn, on behalf of the Bay County Medical Society, then extended a hearty welcome to the city. He said a very warm feeling exists in Bay City toward the State body.

The Executive Committee then reported the different arrangements that had been made to entertain the society outside of business hours. The Masonic and Bay City Clubs were accessible, the steel and wooden shipyards were open, the sawmills and the salt blocks might be visited, and the carriages of the people of the city would be at the disposal of the visitors Friday morning at the hotel doors to take them around the city.

The Secretary, Dr. Charles W. Hitchcock, of Detroit, read his annual report. It told of the benefit to be derived from the passage of a bill to create a Board of Medical Examiners, but inasmuch as Governor Rich had just vetoed the bill, that portion of the report, he said, would have to go for naught. The Secretary further reported that owing to the inaccessibility of portions of some counties it had been impossible to get local societies organized. He cited one case where one side of a county had a well organized society while the doctors of the other side were not members because they could not conveniently attend the meeting. Dr. Hitchcock urged that more effective work be done by forming a society in every county in the State.

On motion, a committee consisting of Drs. Boise, Connor, Patterson, Newkirk and the Secretary were appointed to devise some means to increase the membership of the State Society.

The report of the Treasurer, Dr. Wm. G. Henry, of Detroit, was read by the Secretary, owing to the fact that Dr. Henry was confined at home by sickness. The reports were adopted.

During the morning session the Committee on Admissions reported favorably on several applications for membership.

The Committee on Necrology gave short sketches of twelve deceased members.

Under the head of reports of Special Committees the following were adopted: 1, to memorialize the Legislature in reference to the bill for the prevention of blindness; 2, to take action on establishing a Bureau of Public Health; 3, to petition the Legislature with reference to an improved plan for registering births and deaths.

The Committee on Legislation told of the hard work it had to do, in order to have the Legislature pass the bill creating a Board of Medical Examiners, and when it was announced that all the work had amounted to nothing because Governor Rich had seen fit to veto the measure, the news was received with hisses.

Dr. Donald Maclean, of Detroit, called the attention of the Society to the advisability of reverting to the old method of electing officers, by which nominations are made in open session.

The following amendment was adopted: To change Article v, Section 1, of the Constitutihn, so as to read "To facilitate professional and scientific work, three Sections are established, namely: 1. Section on Medicine and Obstetrics; 2. Section on Surgery and Ophthalmology; 3. Section on Abdominal Surgery and Gynecology."

The amendment to add to Article II of Section I of the Constitution, "Provided that no alien can become a member of this Society," was lost.

A committee of three was appointed to take into consideration the question of order above [illegible]. The point aimed at is [illegible] can not be employed.

President Walker announced that it would be necessary for him to leave the city in a few hours, and desired permission to deliver his address, which was granted.

In his remarks he touched upon several topics, and among other things he said: "Should we make an inventory of the progress of medicine and surgery we [illegible] the advance in our profession during the last fifty years is far beyond that of any previous half-century. [illegible] authorities [illegible] such that no objection is accepted [illegible] stood the test of crucial [illegible] due to the [illegible] thereby permitting the surgeon [illegible] exploration and the physician [illegible] with remedies. [illegible] were [illegible] had heretofore been [illegible] suture it is undoubtedly [illegible] being easily made aseptic. We [illegible] are for this reason returning to [illegible]. The introduction of anesthetics such as [illegible] form in 18[illegible] and cocaine in 18[illegible] made it possible for more operators rather than the few such as [illegible] in the days when it was necessary to [illegible] straps and other apparatus. Surgery had now entered upon a new era when greater care in detail of manipulation could be exercised rather than manual dexterity. Yet ideal surgery was not realized until the advent of antisepsis, due to the efforts of Pasteur through his studies of spontaneous generation, when after twenty years of investigation in 18[illegible] he announced his results to the Paris Academy of Medicine, that which overthrew the doctrine of spontaneous generation and established a pathology founded upon bacteriology. This study of bacteriology has opened a still wider field of investigation and made it necessary that we must have at least a thorough theoretical knowledge of the subject to appreciate its importance, while every progressive surgeon and physician must do practical work in the bacteriologic laboratory. Suppuration twenty-five years ago was the rule and meant a fight to the death of either the phagocyte or bacterium. Pus is dead phagocytes, the prevention of which is the aim of the surgeon; how well he does it is shown by results. Antisepsis and asepsis are too often a farce. Few but believe in its efficiency, yet how few accomplish it simply from a failure to follow out every detail, for a weak link in a chain makes the whole worthless. The knowledge of the bacteriologist has made surgery what it is to-day, a nearly perfect art. All reverence to Pasteur and Lister!

How is it with the pathology of the internal organs? The toxins of the microörganisms producing typhoid fever, cholera, diphtheria, etc., are gradually becoming better understood and immunity by inoculation promises much. Jenner by accident gave us the first evidence of immunity which has been used empirically for nearly a century, and is now regarded as a scientific application of the principles of bacteriology. It is hardly necessary to measure the results by this method in the treatment of hydrophobia. We have not, however, been as successful with the uses of certain remedies against tuberculosis, yet much is promised by the nucleins. Serum therapy evidently possesses great advantages in combating diphtheria; it has not, however, stood the test of crucial criticism as yet. This intense investigation has developed a large body of specialists who in many departments have done the great wonders of our profession. Yet with all due respect to the specialist I can not but feel the furore in some instances goes beyond its environment and has done much to injure true conservative surgery and medicine. A specialist is not made in a day. He should be the product of scientific evolution. The laxness of the laws governing the practice of medicine in this country is gradually disappearing.

The adoption by a great majority of the medical colleges of the United States of a four years' graded course is another step in the proper direction, and a still further advance should be a more rigid entrance examination, a thorough scholastic training, a knowledge of biology, botany, chemistry and bacteriology should be a part of the requisites for entrance, and not a part of the curriculum of a medical college

Recently I sent out a circular letter to all of the regular practitioners in this State outside of our own membership, inviting them to become members of the society I have received many responses of promises to attend, and others who find it inconvenient to be here at this time, asking if it is not possible to become members upon application without being present I would suggest that a resolution be offered at this meeting making it possible for a regular practitioner of this State to become a member by application on the recommendation of two members and referred to the Committee on Admissions, who should have power to pass upon their eligibility, notifying the Secretary of their action In this way we would secure a larger membership and a larger attendance in the future

"I have some hesitancy in presenting what I am about to do, that is in suggesting the doing away with our Section work There are many attending these meetings who would like to hear all the papers read, for the general practitioner comes here for the purpose of absorbing as much medical and surgical knowledge as possible, which he can not do when the work is going on in different places at the same time Make the session three days, the morning of the first day for general business reports of committees, etc, on the opening of the last day and the rest of the time devoted to scientific work It gives the writer of a paper an opportunity to be heard by all and not by a corporal's guard as is often the case in our present plan of Section work I am aware that there will be opposition by many to this proposition, yet I think the majority will agree with me

Dr Walker concluded by quoting Joaquin Miller's poem, "Down in the Dust"

FIRST DAY—AFTERNOON SESSION

In the Section on Surgery, the following papers were read and discussed A Plea for the Employment of an Almost Discarded Method of Treating Urethral Strictures, by Dr C B Nancrede, of Ann Arbor, Treatment of Urethral Stricture, by Dr E T Tappey, of Detroit, The Cystoscope and its Limitations as a Diagnostic Aid, by Dr F W Robbins, of Detroit, Methods of Relief in Prostatic Obstruction, by Dr Wm N Wishard, of Indianapolis, Ind, Operations on the Prostate, by Dr H O Walker, of Detroit

Papers were read and discussed in the Section on Medicine as follows The Etiology of Diphtheria, by Dr F G Novy, of Ann Arbor, Its Diagnosis, by Dr C H Johnston, of Grand Rapids, Treatment, General and Medicinal, by C G Jennings, of Detroit, and Treatment by Serum, by Dr C T McClintock, of Ann Arbor

In the Section on Midwifery and Gynecology, papers were read on Malignant Diseases of the Uterus, as follows Pathology, by Dr J B Whinery, of Grand Rapids, Etiology, by Dr E G Minar, of Bay City, Diagnosis, by Dr Eugene Boise, of Grand Rapids, Surgical Treatment, by Dr J H Carstens, of Detroit Palliative Treatment, by Dr H W Longyear, of Detroit

FIRST DAY—EVENING SESSION

The evening session was presided over by Dr Victor C Vaughan The session took the form of three addresses

DR SCHUYLER C GRAVES, of Grand Rapids, after a pleasant introduction to his address

THE POETICAL IN SURGERY

said in part

As to title, novelty will certainly be granted, because the laity, and, for that matter, many medical men and women as well, have never thought of any possible connection between the "ars poetica" and the "ars chirurgica"

Science is knowledge, nothing more or less Art is the application of knowledge 'Art is the ability to make manual application of the principles perceived by science For instance—the knowledge that drainage is one of the greatest of the underlying surgical principles in science The application of this principle to any individual case, that is, the securing of the conditions necessary for its operations, art, and the better this is done the more artistic the action

Surgery, then, is a science and an art As a science, however, surgery is purely professional, but as an art it passes beyond the professional and into the poetical Inasmuch as poetry is an expression of the good, the true and the beautiful, surgery, if poetic, must, also, be a reflection of the same attributes Let us see Surgery is good, because it relieves suffering and saves life Surgery is true, because it falters never in the steadfastness of its purpose Surgery is beautiful, because it exhibits results which are pleasing to the eye, and to the mind and heart as well

To many people, thoughts of surgery are associated with such matters as pain and blood and pus, and tumors, and deformities, over which the bird of poesy's paradise does not seem to spread her irised wings, but these things do not constitute the sum total of surgery, and in the contemplation of our theme we must remember that such matters are, ofttimes, but the means to an end, ofttimes, the very stimuli to poetic effort They are but the marble dust and clay on the floor of the sculptor's workshop, the daubings of color on the palette of the painter

DR C B BURR, of Flint, delivered the Address on Medicine He selected for his subject,

SOME CURRENT ERRORS RESPECTING INSANITY

He said it was a grave error to believe in harmless lunacy, that the existence of an insane delusion was a menace to the community's safety Graveyards are recruited constantly through the conduct of the harmless cranks, sane on all subjects but one He asked the question "What marked kinship exists between genius and insanity?" and answered it thus That geniuses become insane through too close application in some particular mental groove is possible, but I am indisposed to think that the existence of genius, properly so-called, is a menace to the person's well-being If his inventive or his literary efforts occupy his entire working hours, interfering with his rest at night, prevent him from exercising and taking food at regular periods, the physical cause for insanity becomes operative If he occupies himself in one line to the exclusion of every other diversion and mental exercise, his horizon will be apt to become contracted but this does not constitute insanity

Great geniuses have usually been great brain workers, have frequently burned the nervous candle at both ends, have too often resorted to stimulants and opium to excite imaginative power, have led profligate and dissolute lives under the temptations and flattery with which they were surrounded, and have placed themselves under conditions which jeopardize the integrity of the nervous system

That there is any legitimate relationship between genius and insanity, may be disputed I have never in my experience discovered such connection

I think there is a general error respecting the relative liability of brain workers and hand workers to insanity As a matter of fact, hard manual labor appears to break down more men and women proportionately than brain work

Another error is the belief that insanity is increasing to an alarming extent That there is a relative increase in nervous diseases is probable, This is due to the absence of any legal restriction upon marriage and the unchecked propagation of the defective classes I am inclined to the belief that diseases which the alienist is called upon to treat, display in recent years a greater tendency to assume organic forms From this tendency which must operate to shorten life and diminish productivity it is perhaps safe to credit a diminution in the number of those nervous diseases in which heredity plays so important a part

Dr Burr, in closing, said that one of the greatest errors was the admission of inferior classes of foreigners who are permitted to become residents of the United States

DR W H YOUNG, of Nashville, read the

ANNUAL ADDRESS

of the Section on Midwifery and Gynecology Among other things Dr Young gave expression to the following views and ideas

I hold that no person can be thoroughly equipped in gynecology whose mind has not been expanded by a general practice, sufficient to enable him to grasp the human system as a whole, and not merely as a part of it Without such training, the specialist is liable to see and to interpret things in the dim light of his own limited sphere, and to forget that the human body consists of and contains more organs and performs more functions than is dreamed of in his philosophy

To be a successful specialist, be that gynecic or whatever else it may be, requires that the mind and modes of reasoning be so fully developed that he may not be blinded to the fact that all headaches are not caused by errors of refraction, to be cured by the proper adjustment of the lenses, or that all pains in the head and back of the female are necessarily due to some organic or functional derangement of the generative organs

Second Day—Morning Session

President Walker called the general session to order. The following officers were elected:

President—Victor C Vaughan, Ann Arbor
First Vice President—H McColl, Lapeer
Second Vice President—R W Erwin, Bay City
Third Vice President—F B Tibbals, Detroit
Fourth Vice President—L G Novy, Ann Arbor
Treasurer—William G Henry, Detroit
Secretary—C H Johnston, Grand Rapids
Judicial Council—Henry B Baker, Lansing, Francis A Rutherford, Grand Rapids, Wm T Dodge, Big Rapids

The officers of the sections are: on Medicine, Chairman, David J Stowe, of Bay City; Secretary, A J Biddle, of Detroit; Orator, H H King, of Grand Rapids.

Surgery, Chairman, D M Greene, Grand Rapids; Secretary, A E Bulson, of Jackson; Orator, C H Baker, Bay City, Mich.

Gynecology, Chairman, L G Minor, Bay City; Secretary, J B Whinnery, Grand Rapids; Orator, Reuben Peterson, Grand Rapids.

Mt Clemens was chosen as the next place of meeting.

Under the head of "miscellaneous business" the Constitution relative to the election of President, Vice President and Secretary was changed so that hereafter, on the morning of the first day's session the nominations for these officers are to be made in open session.

After the adjournment of the general session the Sections reassembled and the following papers in the Section on Surgery were read and discussed: Shock, W S Conners, Saginaw. Cataract—Simple Extraction—Report of One Hundred Cases, Eugene Smith, Detroit. Abdominal Nephrectomy with Report of a Case, Reuben Peterson, Grand Rapids. Selected Cases of Railway Surgery, F P Tibbals, Detroit. Some Reflexes with Cases to Illustrate, F A Porter, Brooklyn. Deafness, what are we doing to Prevent It? W J Stringways, Flint.

The Section on Medicine: The Public Care of Epileptics by Colonization, W M Edwards, Kalamazoo. Friedreich's Ataxia with Cases, Sidney E Small, Saginaw. Some Forms of Trophic Neurosis, with an Illustration, W J Herdman, Ann Arbor. A Case of Insanity during Pregnancy, W G Henry, Detroit. Nuclein in Tuberculosis, with Report of Cases, H M King, Grand Rapids.

The Section on Midwifery and Gynecology gave the following papers: Retro-displacements of the Uterus, J J McLaren, Saginaw. Surgical Treatment of Ectopic Pregnancy, J G Lynds, Ann Arbor. Ectopic Pregnancy, Hugh McColl, Lapeer. Some Points Relative to the Use of Forceps, C H Johnston, Grand Rapids.

Second Day—Afternoon Session

The reading of papers in the Section on Surgery was continued: Extraction of Biliary Calculus from the Common Duct, T A McGraw, Detroit. Reports of Interesting Cases, D Milton Greene, Grand Rapids. Some Features of Strabismus, Leartus Connor, Detroit. An Analysis of Twenty-five Cases of Appendicitis, Schuyler C Graves, Grand Rapids. Neuro-Retinitis with Special Reference to the Monocular Variety, A E Bulson, Jackson. Pathologic Lesions of the Inferior Maxillary Bone with Report of a Case, E B Smith, Detroit. An Unusual Fatal Aural Case, Luke E Schell and Don M Campbell, Detroit.

The Section on Medicine read and discussed the following papers: A Case of Multiple Sarcoma, W J Breakey, Ann Arbor. The Present Management and Treatment of Croupous Pneumonia, D S Campbell, Detroit. Salicylic Acid in Pleurisy and other Diseases with Serous Effusion, George Dock, Ann Arbor. Rheumatism, Its Pathology and Modern Treatment, E S Pettyjohn, Alma. The Nervous Symptoms of Gout, David Inglis, Detroit. Personal Experiences Regarding Altitude in Organic Cardiac Disease, Hugh McColl, Lapeer.

The Section on Midwifery and Gynecology read and discussed these papers: Ultimate Results, Physical and Mental, in Gynecologic Operations, Eugene Boise, Grand Rapids. Menopausal Polysarcia Abdominalis, Walter P Manton, Detroit. Ventro fixation of the Uterus, J J Mulheron, Detroit. The Status of the Buried Animal Suture and Ligature in Abdominal and Gynecic Surgery, H W Longyear, Detroit.

Blank Applications for membership in the Association at the Journal office. Write for them, sent free.

Medical Society of the State of Pennsylvania.

Proceedings of the Forty-fifth Annual Meeting, held at Chambersburg, Pa, May [illegible]

[Specially reported for the Journal.]

(Continued from page [illegible])

Dr Kate D Musser of Easton read a paper on "Nerve-Muscle Atony in Girls."

Dr J N He[illegible] of Slippery [illegible], a paper on "Aconitin in Neuralgia." He spoke of the treatment of the causes of the different neuralgias. The use of aconitin was briefly outlined and he gave a short description of the physiologic action of this drug and a report of his clinical experience with it.

Dr J A Sayre of Connellsville read a paper on "Rational Treatment of Fracture of the Femur near the Hip Joint in Aged Persons." The Doctor briefly related the history of eight cases of what is usually called intra-capsular fracture of femur, and advocated complete freedom in bed on a cotton or hair mattress without any means of support, extension and counter extension, as giving almost the only promise of life, the old treatment being almost invariably followed by exhaustion and death.

At the afternoon session Dr J H F[illegible] of Wilkesbarre read the

ADDRESS IN OTOLOGY

He referred briefly to the work of his predecessors and then discussed the operation on the bones of the middle ear, quoting at some length the reports of Drs S MacCuen Smith, Grunert, Blake, Gomperz, Randall and others. He takes a conservative view of the operation and believes it should not be resorted to until all proper remedial measures have first been tried. He thinks the operation in a majority of cases will soon be abandoned.

The work of the general practitioner in ear diseases should be in the line of prevention and such treatment of acute otitis media as will make subsequent operation unnecessary. He highly recommends early paracentesis of the membrane and thorough attention to cleanliness, with instillation of a few drops of a 4 per cent solution of cocain in Magendie's liquor morphiæ to relieve pain. He also urged especial attention on the part of the general practitioner to treatment of catarrhal troubles of early life, as a means of preventing chronic deafness—the majority of such cases being caused by catarrh of the nose and throat.

The work of the rhinologist can not be separated from that of the otologist; operations on hypertrophied turbinates and deviated septa to secure patency of the nasal passages being an essential part of the treatment of chronic deafness. He uses Deneh's apparatus for inflation of the Eustachian tube in preference to Politzer's air bag.

Mastoid disease was referred to briefly, recommending the general practitioner to perform Wilde's incision early rather than wait to send the patient to a specialist for opening of the mastoid. The address closed with a short discussion of foreign bodies in the ear.

Dr Joseph McFarland of Philadelphia presented a paper on "Bacteriologic Examinations in Medicine or Surgery." He commented on the necessity for accurate systematic study of cases, not only by observation and physical examination, but also with the microscope and culture media, so that unexpected but likely important etiologic factors may be detected. He suggested the organization of laboratories by county and other medical societies, who shall buy and own the necessary apparatus and delegate the work to some competent member who shall receive sufficient compensation to enable him to devote a necessary amount of time and labor to the work. The ideas contained in the paper refer more especially to the organizations in rural districts than to those in cities. For the establishment of the work, and its inception, reference can be made to the gentlemen who have offered their services to the State Society through Dr Stevens, and who will gladly visit any society and tell them how to start and maintain a laboratory.

Dr Jean Saylor Brown of Williamsport, read a paper on "Relief of some Cases of Functional Nerve Troubles by Curing Eye Strain." He gave a list of a few serious cases cured by relieving eye strain, notably, one of tic douloureaux, several of diabetes, and one simulating Basedow's disease, with entire inability to walk, caused by injury to the brain.

Dr H G Chritzman of Chambersburg, presented a paper on "Faith and Therapeutics."

Dr H M Alexander of Marietta, on "Vaccine Virus," showing the dangers of impure virus, the need of care in the culture of bovine virus, etc

Dr H A Arnold of Ardmore, discussed the subject, "Whither are We Drifting?" He described the characteristics of the medical man in mediæval times, and again at a later period He compared medicine and medical men of those times with the present The present evil is the secret processes of manufacture, private formulæ, and the large space devoted to them in the medical journals Is the practice of medicine soon to become nothing more than the means of finding a market for the wares of a host of unknowable medicine makers? Should the wholesale production of new "ines" and "antis" continue, and the flood of literature distributed through the mails be augmented? May it not be possible, in the near future, to discontinue the study of materia medica at our medical schools, and give the time to etiquette, society manners and other nice little things so necessary to attain prosperity?

Dr H A Mowery of Marietta, on "Typhoid Fever"

Dr A Enfield of Bedford, read an article on "Auto-Intoxication with Special Reference to Certain Diseases" He asserted that no germ can produce disease by itself That the vitality and stamina or resisisting power of man must first be broken down before a germ can effect entrance to the tissues We do not always escape typhoid fever when we have pure water The fact that the germ of typhoid fever has been found, does not prove that this germ is the pathogenic agent We have found cases of typhoid fever developing long after all sources of possible infection have been removed The development of disease is not due alone to chance meeting of man and microbe No one pathogenic agent or condition is sufficient to produce disease Man contains within himself the causes for most of his sickness All diseases that have their origin in auto intoxication can be controlled by the free administration of intestinal anti septics

Dr Geo E Shoemaker presented a paper on

VENTRO-FIXATION OF THE UTERUS

Retroversion with descent of the ovaries or of the uterus is a prominent factor in a large number of chronic gynecologic cases The condition is not fully described by the term retroversion, but is far from a simple one Treatment confined to the perineum, if that is lacerated, to the endometritis or pelvic congestion, will produce no permanent change if adherent retroversion persists The pessary can only be used when adhesions are absent, inflammation is slight and the organs capable of being thoroughly replaced In a few cases, watched, it gives all the relief necessary It cures only minor cases and these very seldom

Practically, many cases apply from remote districts, or who are obliged to labor, or to whom months of rest with palliative treatment are out of the question, and then the surgeon's experience teaches that long continued minor treatment will fail Graver degrees of retroversion accompany conditions practically incurable without surgery What shall it be?

The operation for shortening the round ligaments in the inguinal canals is limited to the cases without adhesions, and where the tubes and ovaries are known to be normal These are not the most important cases If thoroughly done it weakens the canal almost as much as a celiotomy weakens the abdominal wall

Ventro fixation is especially adapted to the adherent cases Tubes and ovaries buried in inflammatory adhesions can be freed and treated The bladder is not hampered greatly, as it widens in filling Cases of the writer's hold six-eight or more ounces almost from the start The attachment elongates into a muscular band which allows uterine and bladder movements Prognancy is not interfered with, except in probably increased vomiting and traction in early months The band elongates and again shrinks

Remote results in relieving symptoms are excellent in the writer's experience, but only cases should be chosen where the symptoms are due to the uterine condition Minor retroversion may exist *per se* without symptoms

Ventro-fixation is accessory to curetting and packing for endometritis, to perineal repair and other measures Descent of the uterus below the pelvic outlet demands other treatment

The method followed by the writer includes the buried silkworm gut suture through the rectus muscle and its sheath for the entire wound The second and third sutures below include the fundus uteri None of these sutures have ever required removal

Dr S MacCuen Smith gave an interesting paper on

EMPYEMA OF THE MASTOID AND ITS RELATION TO ACUTE AURAL DISEASE

It was formerly taught that empyema of the mastoid could only occur as a complication of a *chronic* suppurative inflammation of the midddle ear While this is usually true, it is now conceded that this purulent invasion often occurs as the result of *acute* suppurative otitis media This inflammation may arise either by direct continuity of structure by infection through the venous circulation, or through the nutrient vessels which traverse the canaliculi and pass from the carotid canal to the mucous lining of the tympanic cavity This extension of the inflammatory process may be prevented or promptly relieved, by intelligent action on the part of the attending physician

Out of eleven cases of mastoid empyema, arising from acute otitis media, four showed only a superficial abscess five were confined to the *mastoid antrum, and two extended* into the mastoid cells In the four cases of superficial abscess the pus had burrowed its way through the thick outer walls in less than one *month*, and a Wilde's incision was sufficient to establish free drainage In the remaining seven it was necessary to trephine the mastoid It is difficult to account for the extensive destruction to the soft parts and to the dense bony walls, which may occur in a very brief period It is also difficult to explain why the confined pus should burrow out through a very thick plate of bone, instead of penetrating through the thinner osseous wall that separates the mastoid and middle ear cavities from the interior of the skull

The points to be noted are' 1, the fact that mastoid complications do frequently develop from *acute* inflammation of the middle ear, 2, the necessity for prompt recognition and relief of *acute* inflammatory disease of the ear, 3, immediate evacuation of pus when present

Dr S D Risley read a brief paper on

OCULAR AFFECTIONS ASSOCIATED WITH LITHEMIA

Disclaiming any purpose of discussing all the protean manifestations of the gouty or rheumatic dyscrasia, he pointed to the fact that many of the *minor discomforts* and affections of the eye found their *fons et origo* in fleeting and recurring attacks of lithemia in persons who have acquired the diathesis by sedentary habits, imprudence in diet, by chronic malarial poisoning, syphilis, etc, or are victims of hereditary liability Fleeting attacks of conjunctivitis which not infrequently pass for catarrh of the conjunctiva, hyperemia of the uveal tract which may develop the milder forms of recurrent iritis, or even more violent attacks, are frequently due to this systemic condition, and not infrequently their essential nature passes unrecognized Many patients with weak eyes and low grades of refractive error, receive correcting glasses for the relief of their tender eyeballs periorbital neuralgias and occipital headache, when they might be spared the incubus of a pair of glasses, certainly for constant wear, if due attention had been given to this constitutional malady Cases were briefly related to illustrate the various phases of the teaching Unfortunately its manifestations were not confined to these milder forms of eye disease, but were very frequently at the foundation of the most rebellious and fatal forms of ocular affections The serious involvement of the general vascular tree, in the more advanced stages of lithemia, was mentioned briefly and the great liability of the vessels of the choroid and retina to participate in the general disaster urgently insisted upon as of great importance in the study and treatment of many forms of eye disease, *occurring during and after middle life*, in patients afflicted with the gouty or rheumatic diathesis It stood second only to syphilis in the etiology of iritic disease The *impairment of the nutrition of the* eyeball consequent upon the disease of the choroidal and retinal vessels, rendered it especially liable to choroiditis hemorrhagic retinitis, incipient cataract, and the more vicious forms of glaucoma It was this state of the ocular circulation which not only was the origin of many cases of these perilous forms of disease, but which rendered them so fatal to vision and so slightly amenable to all purely local treatment It was the frequency of such participation in general disease which made it necessary for the ophthalmic surgeon to be also a wise physician There was no room, anywhere, for the specialist who divorces his special work from the broad field of medical science

Dr J K Young of Philadelphia, read a paper on "Massage in Surgery" in which he reached the following conclusions

1 Massage as an adjunct in the treatment of surgical disease is apt to be overlooked by the surgeon

2 Its field of application is very large including the diseases of the joints traumatisms, after operations, and diseases of the nervous system

3 Its mode of application differs in the different conditions and must be understood to obtain the best results

4 The advantages to be gained by its more frequent use are more rapid and complete recovery from surgical disease

Dr E E Montgomery of Philadelphia presented the subject When should Vaginal be Preferred to Abdominal Incision in the Treatment of Pelvic Disease Dr Montgomery advocated vaginal incision in all collections of pus in the pelvis which could be readily reached through the vagina and said that this method of treatment in the majority of cases afforded a decreased danger to the patient and an opportunity for recovery without sacrifice of important organs Its practice does not add to the danger of an abdominal operation if the latter is necessary for the cure of the patient Where the uterus is the source of infection as in puerperal sepsis and the sacrifice of the tubes and ovaries is indicated he would also extirpate the uterus and do the operation per vaginam

Dr Charles P Noble of Philadelphia read a paper upon the subject of

MOVABLE KIDNEY,

and the following are his conclusions Movable kidney is a very common condition among women I find it in one fourth of my own patients Both kidneys are movable in about one tenth of the cases The underlying cause of movable kidney is a deficiency of adipose tissue especially in the peri renal region Tight lacing multiple pregnancies and falls occasionally act as contributing causes The symptoms of movable kidney are both reflex and local The reflex symptoms are those at times of neurasthenia, irrespective of its cause In other cases nervous dyspepsia, palpitation of the heart distension of the abdomen with gas and neuralgic areas are the symptoms complained of Patients usually are unable to lie upon the side opposite to the movable kidney The local symptoms are a sense of weight or bearing down soreness in the kidney region attacks of pain similar to renal colic and in rare instances symptoms of strangulation due to torsion of the vessels of the kidney

Movable kidney may be suspected when its rational symptoms are present, but the diagnosis must be made by a physical exploration This should be made with the patient in a standing position The diagnosis can be made with the patient lying on her back only in long standing cases, where the displacement is extreme as usually in this position the kidney slips up under the margin of the ribs In many cases movable kidney gives rise to no symptoms, and therefore does not require treatment The rest cure promises to be efficient in cases of slight degree, as the kidney returns to its normal position while the patient is lying on her back, and the increasing fat which the rest cure usually brings about should effect a cure The rest cure used in cases of long standing, with extreme displacement of the kidney, will improve the general condition of the patient but will not improve the local trouble Nephrorrhaphy is a simple and safe operation, which should be done in the cases having well marked displacement, that is three inches and upward The more marked the local symptoms the more necessary the operation The reported cases indicate that the results are permanent

One object of this paper is to emphasize the great frequency of this condition, and the ease with which it can be diagnosticated Also, to urge upon those who have not done so, the necessity for studying its relation with the various reflex and nervous symptoms met with in thin women

Dr Louis J Lautenbach, of Philadelphia, read a paper on

DEAF MUTES—CAN THEY BE MADE TO HEAR?

During the past sixteen months the Doctor has had under treatment six deaf *mutes* All of these he has treated by massage methods—phono, pneumo and mixed massage In all there has been some improvement in hearing, in three the improvement has been very noticeable From the study of these cases he has derived the following conclusions

1 That no negative opinion as to the results of treatment can be considered as justified, even when all our ear tests fail to indicate the slightest trace of hearing power

2 That every deaf mute should have his ears thoroughly examined, the proper treatment instituted, and that this treatment should consist not only of former methods but should include pneumo, phono and mixed massage treatment

3 That as a result of this method of treatment favorable effects have been obtained which have not been realized by any former treatment

4 That in the present status of our knowledge we know not to what extent the power of hearing may be developed by this method the lack being occasioned by the need of a greater period of time to allow of the further development of the hearing function

5 That even though the hearing of deaf mutes be not restored to normal or anywhere near there, yet the hearing power as developed during the comparatively short period that this method of treatment has been in use would prove of great value to the deaf mute not only in the development of his speech function and in the protection of his person from external injury but would be of great value to his family and friends in their more ready communication with him

6 That through the improvement by the massage treatment the teaching of deaf mutes of the lip reading method and the utterance of sounds in accordance with the latter [illegible] can be more readily accomplished and more deaf mutes thus be given the advantages of such education

On motion the Committee of Publication was given discretionary power to issue the proceedings in journal form

On motion of Dr [illegible] of Philadelphia it was unanimously

Resolved That the Medical Society of the State of Pennsylvania believes that the time has arrived when the questions of public health should be decided and administered by an authority at the National Capital constituted for that purpose solely and therefore urges upon the representatives of the State in the Congress of the United States the importance of sustaining the movement already inaugurated for the establishment of a Department of Health in Washington

On motion of Dr I C Gable of York, Pennsylvania, resolved that this society respectfully suggests to the State Board of Health that the sanitary condition of the establishments for propagating vaccine virus should be subjected to frequent inspection, that we will be ready to co-operate with the board in any measures which may be necessary to provide for such action

On motion of Dr S S Towler of Marienville it was

Resolved, That the Medical Society of the State of Pennsylvania congratulates the American Medical Association upon the decision of the Trustees to exclude unethical advertisements from the Journal of the Association

Resolved That a committee of three be appointed to communicate with the editors of the medical journals of the United States, calling their attention to this action of the Journal of the Association and requesting them to accede to the wishes of the profession by adopting a similar rule

Committee—Drs Towler C H Thomas of Philadelphia J J Buchanan of Pittsburg

A resolution indorsing the idea of the individual communion cup was laid on the table

On motion of Dr H B [illegible] it was

Resolved That the Committee on Pharmacy request of the Pharmaceutical Society of Pennsylvania to transmit the constituents, etc, of the newer preparations for publication in our Transactions, etc

On motion of Dr J A Ehler, of Lancaster, the Secretary Dr Atkinson, was requested to prepare a History of the State Medical Society and present it at the annual session of 1896

Resolutions of thanks were adopted to the ladies, the Committee of Arrangements the Franklin County Medical Society and the officers of this body for what has been done to make this one of the most successful and enjoyable ever held

The society assembled May 21, and formally installed the newly elected officers, after which it adjourned to meet in Harrisburg, the third Tuesday in May, 1896

American Electro-Therapeutic Association

Fourth Annual Meeting held in New York Academy of Medicine New York, Sept 25, 26, and 27, 1894

William J Herdman, M D, President

(*Continued from page 898*)

THE INCANDESCENT ELECTRIC LIGHT, OR RADIANT HEAT BATH

This paper was read by Dr J H Kellogg, of Battle Creek, Mich

Almost since the discovery of the electric light, it has been made the subject of interesting experimentation for the purpose of discovering whether this excellent artificial substitute for sunlight possessed the property of stimulating the vital processes of plant life in a manner analogous to the action of sunlight An interesting paper, by Wm Siemens, published in March, 1880, contained a detailed account of experiments made for the purpose of determining the influence of the electric light upon vegetation, and from which the following conclusions were drawn by the author

1 That the electric light is efficacious in producing chlorophyl in the leaves of plants, and in promoting growth

2 That an electric center of light, equal to 1,400 candles, placed at a distance of 2 meters from growing plants, appeared to be equal in effect to average daylight at this season of the year (March), but that more economical effects can be attained by more powerful light centers

3 That the carbonic acid and nitrogenous compounds generated in diminutive quantities in the electric arc, produce no sensible deleterious effects upon plants inclosed in the same space

4 That plants do not appear to require a period of rest during the twenty-four hours of the day, but make increased and vigorous progress if subjected during the daytime to sunlight and during the night to electric light

5 That the radiation of heat from powerful electric arcs can be made available to counteract the effect of night frosts, and is likely to promote the setting and ripening of fruit in the open air

6 That while under the influence of electric light, plants can sustain increased stove heat without collapsing, a circumstance favorable to forcing by electric light

Similar experiments have been made by others The first to make experiments was Hervé-Mangon (Compt Rend 53, 243) These experiments showed that the electric light was capable of causing the development of chlorophyl and inducing heliotropism, or the phenomenon of turning or bending towards the light

Prillieux (Compt Rend 69, 410) showed in 1869, that the electric light is capable of promoting assimilation of plants, or decomposition of carbon dioxid and water

Siemens found that the plants exposed to ordinary daylight and six hours of electric light in addition "far surpassed the others in darkness of green and vigorous appearance generally" Strawberries and other fruits were fully equal to those raised under ordinary conditions, and grapes were of stronger flavor than usual Melons were remarkably large and aromatic, and bananas were pronounced by excellent judges to be "unsurpassed in flavor"

Many of these experiments have been repeated in this country and with similar results The most important experiments were those conducted at the Cornell University Agricultural Station in 1889 90 These results showed clearly

1 That the electric light may be used under such conditions as to make it fairly comparable to sunlight in its power to promote protoplasmic activity

2 That the electric light acts as a tonic to plants so that they are able to endure adverse conditions which otherwise would cause them to collapse

3 That the electric light is a true vital stimulus, since the effect of its use at night, upon plants, is essentially the same as that of the longer day of the Arctics upon plants growing in that region

Another fact of importance which had sometimes been observed, was the deleterious influence of powerful arc lights upon workmen engaged in close proximity to them, effects analogous to those of sunstroke

Although not fully acquainted with the facts above referred to, when I first began the use of the electric light bath, I had seen brief notices of these experiments, and thereby became interested in the subject from a therapeutic standpoint For more than twenty years I have made use of the sun bath as a therapeutic means, and twelve or thirteen years ago experimented with large convex lenses for the purpose of concentrating the sunlight, and thus intensifying its effects in the treatment of neuralgia, spinal and other hyperesthesias I found good results from its use employed in this way, but did not complete my observations on account of the great amount of time required and the uncertainty of having sunlight at the time desired

Something more than four years ago I began experiments with single lights provided with reflectors, and soon after I had constructed two cabinets, or small rooms, large enough to contain one person, and arranged in regular rows on the inside 50-60 incandescent lamps Since that time I have made constant use of the electric light emitted by the incandescent lamp, as a therapeutic means Together with my colleagues I have employed the bath by this means nearly ten thousand times, and in a great variety of ailments, at the Battle Creek Sanitarium, and have largely used it as a substitute for the Turkish, Russian, vapor, and hot-air baths, all of which I had previously employed for many years Finding it free from any of the objections to which the baths named are open, for numerous reasons, some of which I will point out subsequently in this paper, and also finding its effects extremely agreeable to patients, and remarkably efficacious in many stubborn cases which did not readily yield to other therapeutic agents, I have employed it much more frequently than I had previously made use of analogous means, and in a much wider range of cases

My earliest experiments in the use of the electric light bath showed me that it was capable of producing very characteristic effects This led me to undertake a series of physiologic experiments for the purpose of placing its therapeutic use upon a rational basis, and for the purpose of comparing the effects of the electric light, Turkish, and Russian baths Some of these experiments were made three years ago, others have been made more recently The objects of the experiments were to determine the effects of the electric light bath as compared with those of the Turkish and the Russian baths upon

1 CO_2 elimination
2 The urea secretion
3 Perspiration
4 Surface and internal temperature
5 The number of blood corpuscles and the amount of hemoglobin The results of these experiments and the methods employed may be summarized as follows

1 *CO_2 Elimination* —Three healthy young men were subjected to the influence of the incandescent electric light or radiant heat bath for five, ten, twenty, and thirty minutes respectively, the time being the same for each, and all other conditions being made as near alike as possible The same young men were likewise subjected to the influence of the Turkish and the Russian baths for the same lengths of time, but on different days, care being taken to maintain a uniform dietary during the entire series of experiments, at the same hours of the day The influence of the bath upon CO_2 elimination was determined by carefully measuring with a delicate air meter which I had constructed for the purpose, all the air expired during the ten minutes before the experiment, collecting an average sample of the air for analysis During the bath the air was collected fo the same length of time In a case in which the bath lasted only five minutes, the figures were doubled so as to mak them comparable with the rest In case the bath continued twenty minutes or more, the air was measured and collected during the last ten minutes, the results obtained were corrected for barometric pressure and vapor tension so that the figures given in the table for the different experiment are, in every respect, properly comparable The result were as follows

The average per cent of CO_2 obtained before the experiment was 3 60

For the electric light bath the average per cents obtained were as follows

5 minutes	4 10
10 "	4 10
20 "	4 20
30 "	5 10 and 5 18

In a repetition of the thirty-minute bath, the higher percentage of 5 18 was obtained

For the Turkish bath the average per cents obtained were

5 minutes	4 08
10 "	4 07
30 "	4 01

For the Russian bath the per cent was 3 96 for a bath o thirty minutes

The highest amount of CO_2 elimination was 4 29 liters which was in the incandescent electric light bath for thirt minutes

The temperatures of the air in the baths were as follows

Electric light bath, 28 to 36 degrees C (85 to 97 degree F), or constantly below the temperature of the body, Russian bath, 38 degrees C (100 degrees F), Turkish bath, 5 degrees C (131—155 degrees F)

2 *Urinary Secretion* —The following table shows the averag figures obtained for the three young men who were the subjects of experiment The facts determined in relation to th urine were the amount of specific gravity, the acidity the amount of urea, the amount of uric acid, the total chlo

rids expressed in terms HCl, the phosphoric acid and the total solids The figures given were determined by accurate quantitative analysis of the whole amount secreted in twenty four hours The figures obtained in relation to the most important of these quantities were as follows

Electric light bath Urea	[illegible]32 gms
Total chlorids	6 [illegible] "
Total solids	10 50
Turkish bath Urea	27 [illegible] "
Total chlorids	6 01 "
Total solids	52 70 "
Russian bath Urea	29 [illegible] "
Total chlorids	7 [illegible]
Total solids	[illegible] 11

The figures obtained for the urine were the exact reverse of those obtained for the CO elimination

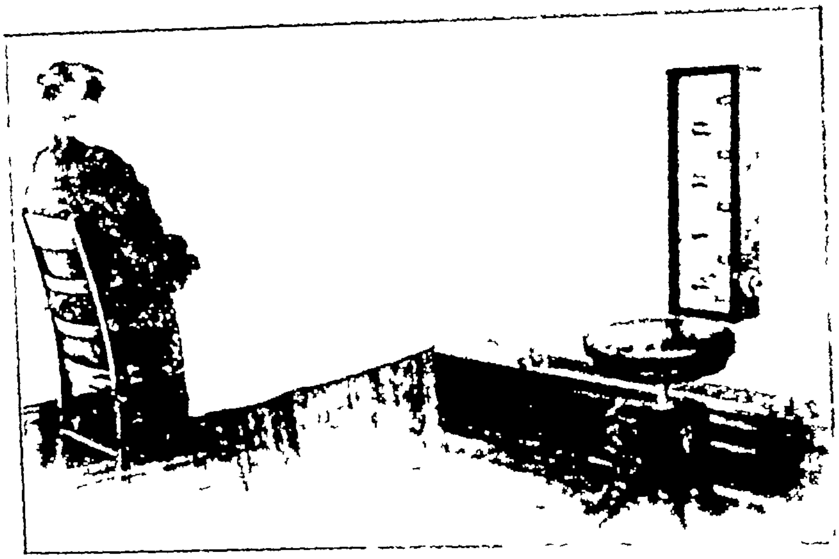

FIG 1—Electric Light Foot and Leg Bath and Spine Bath

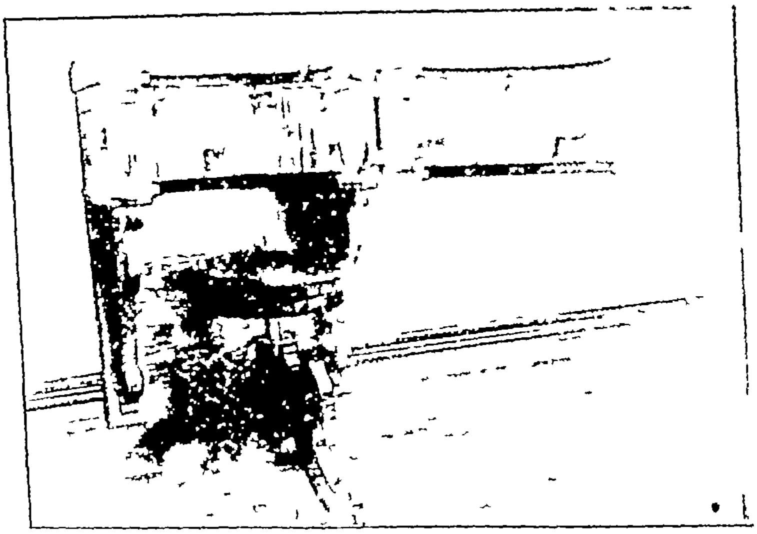

FIG 2.—Electric Light Trunk Bath

The diminished amount of urea, total chlorids and total solids present in the urine during the twenty four hours to which the subject was subjected to the electric light bath was evidently the result of increased elimination by the skin, showing that the electric light bath is much more powerful than either the Turkish or Russian bath as a means of stimulating vicarious eliminative work upon the part of the skin

The amount of perspiration induced by the incandescent electric light bath was fully double that induced by the Turkish bath in the same length of time

The amount of perspiration induced by the Russian bath was even less than that induced by the electric light and the Turkish bath

3 *Perspiration* —Two points were determined in reference to perspiration

1 The time required to induce perspiration

2 The temperature at which perspiration began

The averages were as follows

Incandescent electric light bath time required to induce perspiration three minutes, thirty two seconds The average temperature at which perspiration appeared was [illegible] degrees C ([illegible] degrees F)

Turkish bath the time required to induce perspiration five minutes thirty five seconds Temperature of the bath [illegible] degrees C ([illegible] degrees F)

Russian bath the time required for perspiration [illegible] minutes forty five seconds Temperature [illegible] degrees F

The above figures show very clearly the [illegible] of the electric light bath as a means of stimulating [illegible] activity

4 *Surface and Internal T[illegible]* —The [illegible] bath upon surface and internal temperatures is a matter of [illegible] Howe[illegible] and [illegible] that the heat regulating apparatus of the body is called into operation by a rise in the temperature of the blood [illegible] degrees C ([illegible] degrees F)

In experiments [illegible] for the purpose of determining the effect of the bath upon surface and internal temperature I obtained the following results in a comparative study of the effects of the electric light bath and the Turkish bath upon surface and internal temperature

Electric light bath temperature of bath [illegible] degrees C ([illegible] degrees F) Internal temperature of subject before the bath [illegible] degrees C ([illegible] degrees F) Surface temperature [illegible] degrees C ([illegible] degrees F) Patient began to perspire after one minute At the end of five and a half minutes he was removed from the bath The temperature was taken at once and the internal temperature was found to be [illegible] degrees C ([illegible] degrees F) the surface temperature [illegible] degrees C ([illegible] degrees F) Ten minutes after the bath the mouth temperature was [illegible] degrees C ([illegible] degrees F) and the axillary temperature was [illegible] degrees C ([illegible] degrees F)

Turkish bath temperature of bath [illegible] degrees C ([illegible] degrees F) Temperature of the subject before the bath [illegible] 4 degrees C (97 4 degrees F) axillary temperature [illegible] degrees F Perspiration began in five and a half minutes Immediately after the bath, the mouth temperature was found to be 37 degrees C (98 7 degrees F) axillary temperature 37.2 degrees C (99 degrees F) Ten minutes later the mouth temperature was 37 degrees C (98 6 degrees F) axillary temperature [illegible] degrees C (98 degrees F)

From these statements it appears that the incandescent electric light bath is far more effective than the Turkish bath in raising both surface and internal temperature, which clearly indicates the penetrative power of the intense heat rays of the electric light

5 *The Blood*—The effects of the incandescent electric light bath upon the blood were determined by a careful count of the corpuscles by Gower's instruments and a determination of the hemoglobin by the hematoscope of Henock The figures obtained showed no very marked increase in either blood corpuscles or hemoglobin, although in one case the number of corpuscles was increased nearly 200,000 per cubic mm

The physiologic effects of the electric light bath are chiefly those of heat, and do not differ very essentially from the effects obtained from other sources of heat, except that the electric light bath is a much more efficient and convenient method of administering heat than any other which has been devised, with the exception of water, which doubtless has a wider range of use

The purposes for which heat is applied are usually two

1 The induction of perspiration
2 The stimulation of protoplasmic activity, and thus increasing tissue metamorphosis As before remarked, Bouchard has shown that a rise of temperature of 40 degrees C (17 degrees F) is sufficient to induce perspiration This rise of temperature may be produced either by artificial heat, by the retention of bodily heat, through diminished heat elimination, or by increased production of heat through exercise or other means

In the Turkish bath a high temperature of the surrounding atmosphere and a considerable amount of time is required for the induction of perspiration, for the reason that the heat of the air is slowly communicated to the body and the heating of the skin and, through it, the transmission of heat to the blood is directly antagonized by the rapid evaporation produced by exposure to a dry atmosphere whereby the skin is rapidly cooled This cooling may take place so rapidly, indeed, that a temperature of 500 or 600 degrees F may be tolerated for a short period without injury, as was illustrated by the Fire King who used to enter an oven with a piece of raw beef and remain until it was roasted

In the incandescent electric light bath the heat enters the body directly as a radiant force, instead of by the slow method of convection and conduction, thus more rapidly raising the temperature of the blood, and hence quickly inducing perspiration That heat stimulates vital activity is a fact with which every one who has ever studied the amœba or white blood corpuscle upon the warming stage is well acquainted The effect of poultices and fomentations in producing pigmentation of the skin, as well as the effects of intense heat, either from the sun or other incandescent sources upon the complexion, afford further evidences of this important physiologic effect of the heat Entering the body directly instead of slowly working its way through the poor conductors which are found in the successive layers of tissues which compose the covering of the body, the radiant heat of the incandescent electric light, stimulates and vitalizes the tissues to a high degree

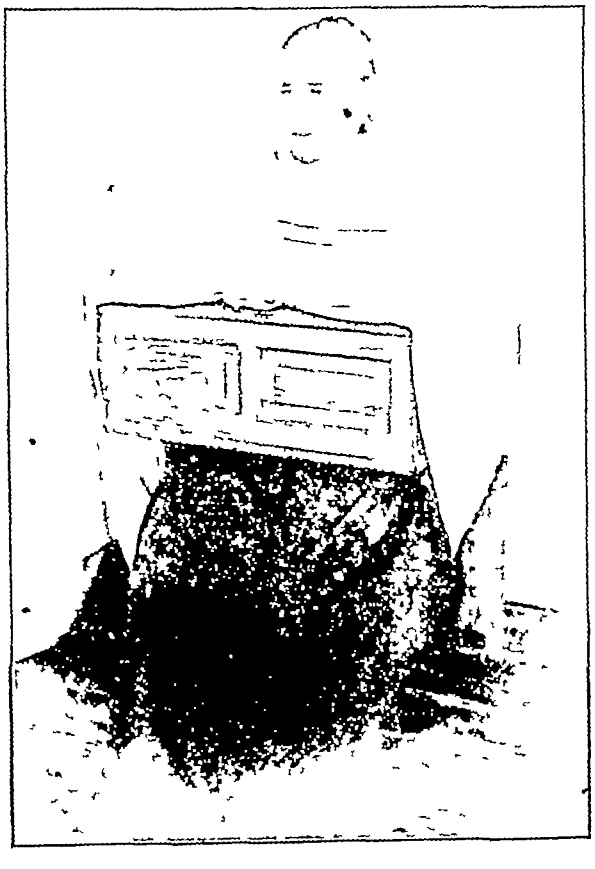

FIG 3 —Electric Light Trunk Bath, in use

Therapeutic Uses —I have found the electric light bath of far greater value in the treatment of a great variety of maladies than any other means of applying heat except water, and find that it may be much more generally employed than the ordinary Turkish, Russian, vapor, or hot air baths One reason of this is the convenience and rapidity with which the degree of heat employed may be graduated by turning on or off one or more groups of lamps, by which means the amount of heat is rendered absolutely and instantly controllable The source of heat relied upon is the incandescent filaments of the lamps rather than a heated atmosphere, and hence is easily and instantly controllable The instant the lamp is turned off, the heat which it has previously emitted is withdrawn from operation If additional heat is required, the desired number of lamps may be turned on and become instantly operative

Another reason for the more universal application of the incandescent electric light bath is the fact that when properly applied, its effects are highly tonic in character A short application of the bath at full force for a time just sufficient to induce powerful stimulation of the skin without provoking perspiration is one of the most effective means of peripheral stimulation with which I am acquainted The tonic effects of such an application may be still further intensified by instantly following the bath with a cold spray or other cold application, thus producing a revulsive effect of the most agreeable and effective character The excessive heating of the skin prepares the way for the cold application, without at the same time so overheating and relaxing the blood vessels as to render recovery of the tone of the cutaneous tissues so tardy as to involve the risk of exhausting the patient too greatly or exposing him to the liability of taking cold

The advantages of the incandescent electric light over the arc light for therapeutic applications are

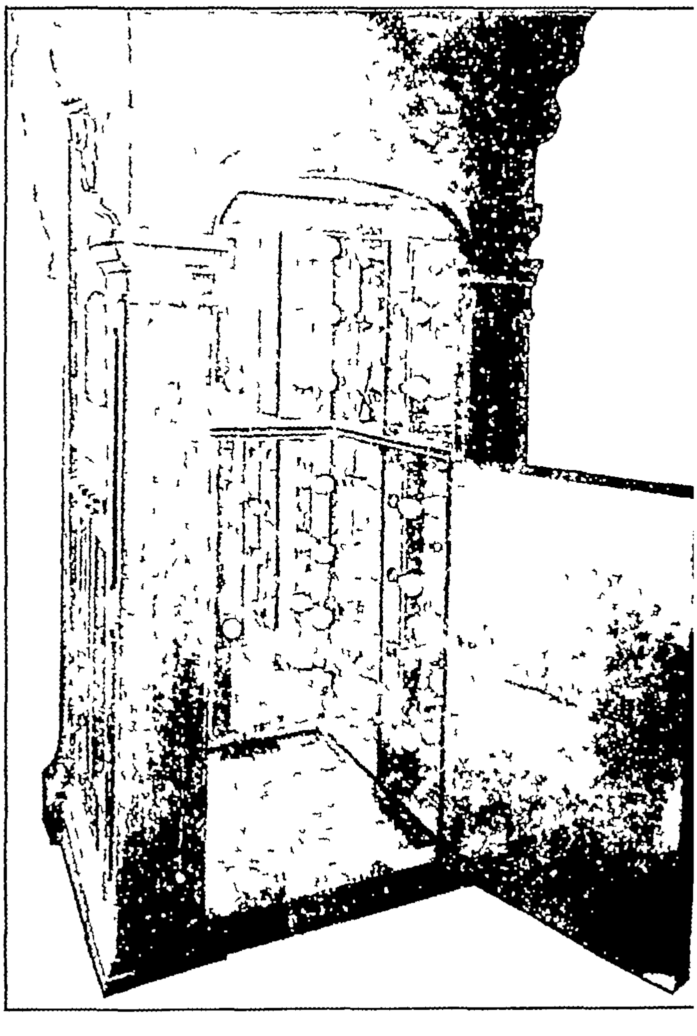

FIG 4 —Upright Cabinet Electric Light Bath

1 Its superior convenience in application and distribution in the bath
2 Freedom from the deleterious effects which several observers have noted as due to the arc light when in too close proximity to plants, or when nearer than 2 meters These effects were found to be not due to the gases given off by the lamp, but to some effect from the light itself It can not be doubted that similar deleterious effects might follow the use of the arc light when applied for therapeutic purposes if placed nearer to the patient than six feet, a fact which must render its use inconvenient, if not dangerous, to say nothing of the impossibility of securing a uniform distribution in its application

Still another especial advantage of the incandescent electric light bath over other sources of heat is the facility with which it can be localized In this respect it is far superior to fomentations or any other local applications By means of suitable appliances, the heat can be focused upon a small point if desired and affects not only the surface but the deeper tissues I am sure that the radiant energies of the electric light penetrate these tissues to a depth of several inches This I proved by actual observation as before intimated For deep seated pain, as well as for the relief of hyperesthesias of the skin I know of no remedy more valuable Many applications of this sort have been made by myself and my colleague, more than a thousand in all and I have constant reason to be grateful for the acquisition of this therapeutic measure, as it has afforded relief to many cases which have stubbornly resisted all other therapeutic means which I have been able to employ

I append to this paper a report of a number of cases treated by myself and my colleagues at the Battle Creek Sanitarium by means of the incandescent electric light bath and local applications of light which are simply illustrative of hundreds of similar character which might be given

Rationale of the Effects of the Incandescent Electric Light Bath —The peculiar value of the electric light bath I consider due to its efficiency as a source of radiant energy In the Turkish bath heat is communicated to the body chiefly by the convection of heat and air Air being a very poor conductor, communicates heat to the body very slowly Absorption of heat is further hindered by the skin, an excellent non conductor, and by the rapid evaporation of moisture upon the skin, whereby it is cooled so rapidly that it is impossible for a man to enter and remain for a considerable time in an atmosphere far above the boiling point I have several times been in a Turkish bath at 300 degrees and suffered no inconvenience The heat is derived from the electric light, however, by radiation, and not by convection The skin, as well as the air, is to a large extent transparent to radiant heat and the same is true of all the living tissues This is evidenced by the phenomenon of transillumination By a speculum placed in the vagina or rectum and a suitably arranged electric light of 16 or 32 candle placed over the abdomen, it will be seen that the whole interior of the trunk is illuminated and made to glow with a bright red light, the red color being due to the reflection from the red corpuscles of the blood Even the bones are transparent to light when in a living state This is clearly shown by placing the hand between an electric light and the eye with the fingers in close contact the hand being placed near enough to the light, the whole finger will be seen to be illuminated by the light and not simply the soft parts

FIG 5 —Cabinet Electric Light Bath in use, head excluded

It may thus be said that heat from the electric light penetrates the body just as it would penetrate any other transparent or semi transparent medium while the heat of the Turkish vapor or Russian bath is communicated to the body by convection and slowly works its way into the body by heating the successive layers of living tissue which, although like glass transparent to radiant energy also possess to a greater or less degree the non conducting powers of glass and allied substances It is true that non luminous as well as luminous heat waves are thrown off by heated bodies The whole gamut of radiant energy in the form of heat being stated to consist of fully four octaves more than two of which are below the red, while a whole octave is above the violet the luminous range occupying a space only a trifle greater than what would correspond to the chord of the sixth in music But the lower octaves of these heat waves seem to be far less active than those included within the luminous range and above it I do not consider that there is any specific effect obtainable from the electric light which would not be derived from any equally efficient source of radiant heat, and on this account I have preferred the term *the[illegible] [illegible] bath* rather than *electric light bath* as the former term leaves room for the employment of any other luminous source of heat which must possess properties identical with those of the electric light

One of the great advantages of radiant heat or incandescent electric light bath of the Turkish Russian vapor, or similar form of bath is the fact that the body can be subjected to the most intense heat desired without overheating the patient and without overheating the atmosphere surrounding him This is due to the well known fact that rays of heat pass through such transparent media as the air without heating them This accounts for the intense cold experienced by balloonists and by those who ascend high mountains, even in the tropics The woodchopper in the logging camp roasts his back before a big log fire on a cold winter's day, while Jack Frost is taking sharp nips at his nose on the other side So the man in the incandescent light bath while perspiring freely may be surrounded by an atmosphere considerably below the temperature of the body as shown in my experiments and in the daily application of the bath

The question of priority in the use of the electric light bath is one in which I am not especially interested but so far as I know, an empiric in Cincinnati was the first to make use of the arc light for therapeutic purposes His use of the bath, however, was in connection with the 'blue glass' fanaticism which spread so extensively over the country a few years ago, the electric light being substituted for sun light, a very uncertain quantity at some seasons of the year His use of the bath was however, not founded on a scientific basis and I have always regarded it as unworthy of thought or attention About four years ago one of my colleagues Dr Kate Lindsay, called my attention to the personal benefit derived from the use of the heat of the electric light obtained by the application of a lamp in contact with the body and covered in such a way as to collect and retain the heat derived from it I learned from several other persons of similar effects obtained in the same way and had constructed a variety of devices for applying heat at once to the different parts of the body and also had constructed means for general application

The first bath for general application consisted of a bank of lights, between thirty and forty in number, arranged upon a frame which was hinged upon the wall in such a way that it could be raised and folded back against the wall while the patient was placed upon a suitable couch beneath it The patient being in readiness, the frame was lowered to a position about six inches above the body of the patient, and the space about the patient inclosed by means of curtains which dropped from the edge of the frame carrying the lights

The second form of bath which I had constructed soon after, consisted of a cabinet about eight feet in height (Figs 4 and 5) upon the inside of which were placed between fifty and sixty incandescent lights arranged in rows, the spaces between the rows of lights being filled with silvered glass so as to multiply the number of lights to an infinite number by reflection The cabinet is so arranged that the whole body of the patient, including the head, can be exposed to the influence of the light, or the head can be excluded, as in the ordinary vapor bath The cabinet is freely ventilated, and by means of switches and a proper grouping of the lamps in wiring, the number of lights in use can be instantly and perfectly controlled This bath, which I have had in use for more than three years, is somewhat imperfectly shown in a photograph that I herewith present A description of this bath was published in a German medical journal by Dr Gebhardt, who visited the Sanitarium and personally tested the bath something more than a year ago

The third form of bath for general application of the incandescent light, which I have had constructed more recently, consists of a cabinet lined with mirrors (Fig 6) and containing some sixty incandescent lights, so arranged that the patient lies in a horizontal position, the lights being placed on three sides The patient lies upon a suitable couch with rollers, which is pushed entirely within the cabinet, or only so far as to expose such portions of the body as it is desired to bring under the influence of the radiant light and heat By this plan the influence of the light can be confined to the feet and legs, or any other portion of the body up to the neck It is only necessary to protect, by a sheet and a piece of mackintosh, any portion of the body which it is desired to exclude from the action of the bath

I have also had constructed and have in use special appliances by means of which applications may be conveniently made to the spine, the trunk, the feet, and other parts of the body

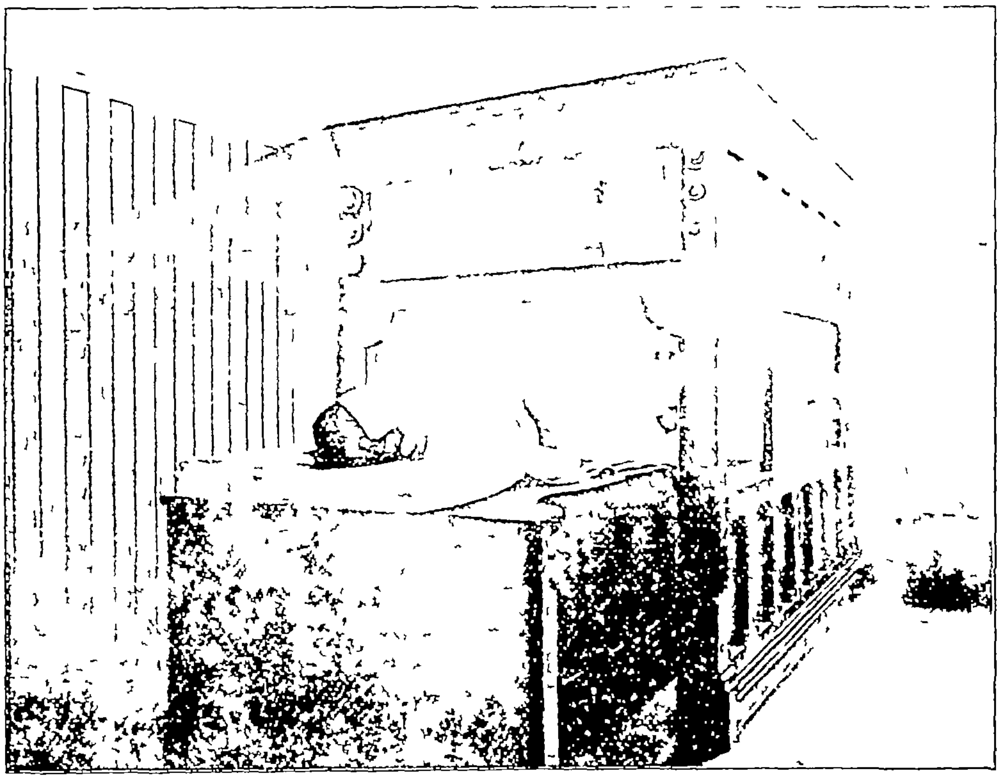

Fig 6—Horizontal Cabinet Electric Light Bath

After nearly four years' use of the electric light bath in a great variety of ailments, I esteem it as of greater utility than any other means of applying heat to the body, with the exception of water, the universal applicability of which gives it paramount value over all other therapeutic agents which can be employed for this purpose

In conclusion, I wish to acknowledge my indebtedness to Professor Gomberg, of the University of Michigan, who kindly consented to devote a part of his vacation to the tedious chemic work required by this investigation, and to my assistants, Drs Rand and Paulsen, who assisted in the chemic work, and carried out the details of the experiments with great painstaking, and to Dr Burleigh for careful studies of the blood in connection with the experiments

DISCUSSION

The President said he was satisfied that in the therapeutics of light we are going to have very rich results

Dr Massey asked what the effect had been when the application had been made to the whole body

Dr Kellogg answered that he had found that when applied locally, with a powerful light, it tanned the skin

Dr Dickson said that after the last meeting he had visited Dr Kellogg's Sanitarium, and had personally experienced the effect of one of these electric light baths In his own case, it was difficult with drugs to produce diaphoresis He had been warned that the electric light bath produced diaphoresis at a lower temperature than a Turkish or a Russian bath, and he had only been in the bath for a very short time before he realized the truth of this statement The sensation was decidedly pleasurable and very restful The head of the person was not exposed directly to the full light He was thoroughly convinced by this experience that the electric light did really produce diaphoresis at a lower temperature than the other baths

Dr Morton said he was very glad that Dr Kellogg had brought this subject before the Association We should all follow it up more carefully than heretofore He wished to congratulate the author on his methods of study—his physiologic experiments—as it was in just this way in the study of the ashes of the human machine that we could get the information which we so greatly desired He had himself used the electric light as a local bath for a number of years—that is, a single portable incandescent lamp wrapped in a wet towel and used as a poultice He had found it a very useful means of applying moist heat to patients in our modern hotels He had hoped to hear that there were effects from the electric light apart from the heating effects

Dr Goelet asked what the effect of the light was upon the eyes

Dr Kellogg replied that the patient either closed the eyes or they were protected by a screen The differences in the electric light bath from the Turkish and Russian baths might be attributed to the light, if one so desired His statement on this point was purely theoretical, and it was quite possible that the very marked difference in the effect of the electric light bath might be due to the light and not to the heat The quantity of perspiration was increased to double that by the Turkish bath for the same time It was also noticeable that the surface temperature was higher than in the Turkish bath The heating effects of the spectrum were included in a whole gamut of four octaves, whereas the light effects were in a comparatively small area The blue and red rays were very active as were also those above the visible end of the spectrum The non-luminous rays below the red and above the violet were capable of producing photographs, and hence the therapeutic effects appeared to be due, not to the light but to the heat—at any rate, heat was a larger term and included light

The Association adjourned at 6 15 P M

(To be continued)

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SATURDAY, JUNE 22, 1895.

SEWAGE DISPOSAL ALONG THE GREAT LAKES.

In the report of the Chicago Health Department for 1894 recently issued, appears a tabulation of the claimed populations, reported deaths, and annual death rates per thousand, based thereon, of the sixteen cities of the United States having more than 200,000 inhabitants each. These embrace, in the order of lowest death rates per thousand of population, the following cities: Chicago, 15.24; Detroit, 15.49; Milwaukee, 15.71; Cleveland, 15.86; St. Louis, 16.13; Buffalo, 16.76; Pittsburg, 18.17; Philadelphia, 18.28; Cincinnati, 18.29; San Francisco, 18.85; Baltimore, 19.11; Brooklyn, 20.11; Washington, 20.23; New York, 21.03; Boston, 22.99, and New Orleans, 24.88.

The striking feature of this table is the group of cities lying on the shores of the Great Lakes—Chicago, Milwaukee, Detroit, Cleveland and Buffalo. The aggregate claimed population of the total sixteen cities is 9,934,058 and the aggregate of reported deaths is 185,632—an average mortality of 18.68 per thousand of population. But the five Great Lakes cities enumerated, with an aggregate population of 2,752,727, or nearly 28 per cent. of the total, reported only 42,830 deaths in 1894, which would give a mortality rate of 15.56 per thousand. This is nearly 22 per cent. less than the death rate of the remaining eleven cities, which is 19.88 per thousand. Without discussing at this time the credibility of these figures, it may be noted in passing that their compiler obviously anticipates that they will be challenged, and so says:

"An urban death rate and especially a Chicago death rate of less than 18 per thousand has been pronounced incredible by the highest statistical authority in the country, and it is [illegible] reply will [illegible] Nature could [illegible] 'brute force' of these [illegible] recourse [illegible] to [illegible] with a conspiracy of [illegible] returns and exaggerations of population [illegible]."

The point of present interest [illegible] is the fact that the cities with highest death rates from all causes as shown by the table have [illegible] from typhoid fever and [illegible] has this wonderful [illegible] Lake cities. [illegible] mortality from typhoid fever per 100,000 [illegible] for the past five years has averaged for New Orleans—with a general death rate of 24.88 per thousand in 1894—only 21.1 per 100,000 from typhoid fever; Boston—general death rate 22.99, [illegible]6 from typhoid; New York—general death rate 21.03,—20.3 from typhoid; Brooklyn—general death rate, 20.11—19 from typhoid; Philadelphia—general death rate, 18.28—18 from typhoid fever. Or comparing the aggregates of the two groups of cities, it appears that while the five Lake cities had an average general death rate from all causes of only 15.56 per thousand as against a similar average for the five cities last above enumerated of 20.62 per thousand, they had 176 deaths per 100,000 from typhoid fever as against only 28.3 typhoid fever deaths per 100,000 in the five contrasted cities. In other words while the general death rate was 24.5 per cent. less in the Lake cities it was 10 per cent. higher from typhoid fever.

These figures, which—whatever their individual inaccuracies—are sufficiently large to generalize from, lend pertinence to the recent comments of a sanitary engineer on the discharge of sewage into the waters of the Great Lakes and into tide water.[1] In perhaps no other respect, says this writer, has the progress of sanitary engineering run more directly counter to the original popular notions in regard to sewage disposal than in the matter of the discharge of sewage and garbage into either tide water or the waters of the Great Lakes. "In the early days of the discussion of the sewage question in general, it was thought that any system by which sewers could be emptied into either of those classes of waters was, if not perfection, at least so near it that the difference was practically nothing. Tide water, especially along the seashore, was generally considered to be the ideal receptacle for cities and towns, the large body of water affected being so great that the degree of dilution was deemed sufficient to render the effects of contamination practically *nil*, and essentially the same assumption was employed to justify the use of the waters of the Great Lakes for the same purpose by the cities located along their shores."

Practical experience has demonstrated what science had already predicated upon the known laws of diffusion, sedimentation and purification of polluted waters The disposal of sewage in a water supply is a sanitary atrocity which future generations will refuse to condone Sooner or later, if communities will not protect themselves from such a revolting violation of sanitary common sense, the general government must intervene and positively prohibit the discharge of untreated sewage or other pollution into any stream or body of water whatsoever The figures herein cited are of themselves a sufficient argument for such intervention at once, but they lack the force they would have if promulgated by some authoritative body

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[1] The Engineering Record, June 8, 1895.

Let us have a Department of Public Health!

SOME PATHOLOGIC RELATIONS OF LUSCHKA'S TONSIL

Mouth-breathing, imperfect development of the chest, anoxemia, general mal-nutrition and impaired intelligence are generally acknowledged, since the researches of W MEYER, a quarter of a century ago, to be among the direct consequences of hypertrophy of the adenoid structure in the upper portion of the naso-pharnyx, just as truly as deafness and catarrh of the upper respiratory tract are also symptomatic of this condition HARRISON ALLEN, in a short communication to the Pennsylvania State Medical Society (read May 22), has still further elucidated this subject by contributing the results of his recent pathologic and clinical observations In addition to the classical form of obstructive disorder having its site in the pharyngeal tonsil, ALLEN recognizes two others, each of which have interesting clinical relations which are well worth attention and investigation The three forms of adenoid disease of the pharnyx, in accordance with this classification, therefore, will be

1 Hypertrophy, with mechanical obstruction to respiration

2 Deformity of the bony walls of the naso-pharynx, causing the normal adenoid mass to obstruct nasal respiration, and

3 A non-obstructing growth in a capacious naso-pharynx, which acts, in some unknown manner, so as to seriously disturb the general health of the patient

The first class is sufficiently familiar to clinical observers, and need not be dilated upon In the second class, the interest lies not so much with the adenoid structure as with the abnormal conformation of the skull, which causes a small adenoid mass to obstruct a narrow, acutely-angulated naso-pharynx The subjects of this are often micro-cephalic and cretinoid, and are frequently met with in institutions for the feeble-minded, although occasionally such patients are also seen in private practice The condition is obvious upon inspection or digital exploration, the diagnosis is promptly made and the treatment is identical with the first class, avulsion of the greater part of the mass, and applications of astringents and detergents E FLETCHER INGALS, in an analysis of one hundred cases presenting hypertrophy of the pharyngeal or Luschka's tonsil,[1] expressed the opinion that in at least 90 per cent of these cases the disease occurred in infancy or very early childhood, and he doubted very much whether the disease is ever developed after puberty Some are probably congenital in origin and, in at least 10 per cent, it appears to be hereditary, several cases occurring in the same family Improvement in intelligence and nutrition is very evident after operation, the patient often gaining 30 per cent in weight within six months

The third group deserves special consideration It constitutes what ALLEN terms a veritable "adenoid disease" Here there are no symptoms of obstruction complained of, the vault of the pharynx is capacious and, after careful examination, no material increase of adenoid tissue can be discovered The size of the mass, in truth, appears to be relatively unimportant, the fact that the mass itself is mischievous is of great importance in this class of patients In view of the evident impairment of health in these cases,—and the gravity of the disorder is greatest in children on account of the lowering of vitality and defective development, amounting often to a veritable cachexia—ALLEN proposes the name of "adenoid disease" for this group Indeed, such cases could scarcely, with propriety be called adenoid hypertrophy, because there is no hypertrophy, or, if it be present the moderate increase in size of the adenoid mass is relatively insignificant, existing as it usually does in a roomy naso-pharynx In class second this peculiar condition may also exist, however, and, in a word, adenoid disease may or may not be associated with mechanical obstruction to breathing

The novel and original suggestion of ALLEN, which makes this a decidedly valuable contribution to the pathology of new growths in the pharynx, is that there is a possible clinical relation existing between the pituitary body and the glandular mass lying immediately beneath it in the vault of the pharynx In early life there is a canal through the base of the skull, which is a direct channel of communication between these two anatomic structures which, moreover, have many histologic features in common It was suggested many years ago by OWEN that this canal and the pituitary body are a part of the remains of a primitive esophagus The lower half of the pituitary body is largely composed of the same character of glandular and epithelial elements as constitute the mass of adenoid tissue to which reference has been made.

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[1] The JOURNAL, Sept 29, 1894

Recent investigations into akromegaly, giant growth and various profound nutritive disorders have shown them to be associated with increased growth of the pituitary body. Analogy would suggest that similar nutritive disturbances might follow adenoid disease of the naso-pharynx. In point of fact, ALLEN has reported several cases of this kind in which unexpected amelioration followed extirpation of the adenoid mass. The thought is suggested that even in typical cases of akromegaly this simple operation might produce some change with possible improvement in the condition. For this application ALLEN is not to be held responsible however, but the suggestion seems germane and especially noteworthy on account of the paucity of our therapeutic resources in this strange affection.

It is to be observed, on the other hand, that general treatment is often necessary. HOLBROOK CURTIS, of New York, last year reported a case of myxedema to the Section on Laryngology in which it was noted that there was atrophy of the glandular tissues of the pharyngeal vault. Striking improvement in the mental condition and the general health of this patient followed the administration of a preparation of thyroid extract.[2]

In order to establish the pathologic and clinical relations of adenoid disease it will be necessary, as opportunity offers, to make careful post-mortem observations of the brain and naso-pharynx. ALLEN suggests that in such examinations, the base of the skull embracing the membrane and outgrowth from the pharyngeal vault, the pituitary fossa and pituitary body, be removed as in a single piece, and this be prepared in the usual manner for microscopic examination. Together with this, the pineal gland should be preserved and examined. Such studies of the morbid anatomy of these cases may throw a flood of light upon the etiology of certain disorders apparently having their origin in this part of the body. Adenoid disease is allied to disease of other parts of the great lymph systems of the human organism and their special differentiations. It is necessary, therefore, to study it, as suggested by ALLEN, in the same careful manner as akromegaly, myxedema and allied affections have been investigated.

CONSERVATIVE GYNECOLOGY

The late meeting of the American Gynecological Society had one very pleasant feature. Most gynecologic meetings of late years are so apt to be assemblages where exhibition of gory tumors and statistics of radical operations are made the subject of the leading discussions, that it does one good to report that the article which created the most enthusiasm was one read by Dr. FERNAND HENROTIN, of Chicago, on a conservative method of treating inflammatory pelvic affections in their incipiency by a minor surgical procedure. This consists in making an incision behind the cervix, and as soon as [illegible] is established and penetrating the inflammatory focus with the finger, an iodoform gauze drain is inserted and left in place. [illegible] only six or seven days, the Doctor [illegible] cavity is usually found, and in all [illegible] treated no bad symptoms followed and the patients recovered, all of them apparently cured, before the establishment of any of the [illegible] that generally lead to chronic invalidism and require laparotomy. While HENROTIN does not claim [illegible] for making use of vaginal incision, he pertinently points out the simplicity of his technique, and particularly insists upon this procedure for the treatment of these diseases in their very beginning, that women may be treated and cured by simple and rational surgery before mutilating measures are necessary. He also reflects upon the value of the digital exploration of the inflamed organs in settling mooted questions in these troubles, the same as has been done in regard to appendicitis, chronic pelvic ailments, and many other diseases.

Time and experience will teach us whether these sanguine views are correct and reliable, but it is a hopeful sign to see our best gynecologists receive such conservative papers with pleasure and encouragement.

Regarding the treatment of chronic diseases by radical measures, it is doubtful if any advance, further than perfecting details, will ever be made in the gynecology of the future, but in reviewing the field we must acknowledge that little has been done toward curing the poor woman who has just reached her couch of suffering with her first attack. The hot poultice, or the douche, or the drug does not seem to have materially lessened the number of our unfortunate sufferers, so that in retracing their footsteps back to the methods of the older SIMPSON, and bending their energies to the development of conservative and prophylactic work, gynecologists are putting themselves in line with co-workers in other specialties and showing commendable scientific courage.

The specialist who will show us how to cure the pelvic sufferer without mutilation will, indeed, have reared a noble monument.

A SO-CALLED "AMERICAN QUACK" IN DUBLIN

The *Medical Press and Circular*, June 5, pays editorial attention to a MRS. POTTS, MRS. DR. LONGSHORE POTTS, in fact, as a well-known "American quack." It appears that this lady has before now proffered her medical talents to the Irish sick, and on neither occasion has she reaped any great harvest She belongs to the lecturing fraternity whose specialty is the reproductive organs This lady also sells a "trumpet pessary" and bloweth her own horn in a fluent and rotund manner, she is a "brazen speaker," says the *Press* "Lecturers there are who hail from America, and who seek to make their living by orating on public platforms about matters which modest people would avoid mentioning, are always confident and are certain to fetch a number of impressible women Our object in noticing this particular quack is to say that the idea that she holds any medical qualifications recognizable in this country is entirely erroneous, and it is well that the public should be informed with some exactness as to the status of American colleges, lest other persons may gain credit in this country for qualifications which they do not possess In the States there are no less than one hundred and fourteen medical colleges, some of them, such as Harvard, Yale, and the University of Pennsylvania, are of the highest repute, others mere disreputable diploma shops Every one of these colleges can grant diplomas, but no person can practice on such qualification until he shall have also passed an examination held by the authorities of the State in which the diploma is granted by examiners appointed by the Executive If he passes this State examination he can be registered, and may practice within the boundaries of that State, but he becomes an unqualified practitioner the moment he moves into another State, and must pass the examining authority which has jurisdiction in his new domicile

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[2] THE JOURNAL, VOL. XXIII, page 486.

As a sort of informal guarantee for the educational status of certain of these one hundred and fourteen colleges, an 'American Medical College Association' has been formed by the more reputable of them, and no college or university is admitted to membership of this Association unless both its courses of study and its examinations are up to standard There are thirty colleges in this Association, of which the Female Medical College of Philadelphia, of which Mrs Longshore Potts says that she is an M D, is *not* one It is, in fact, a small proprietary diploma shop which few have ever heard of, and fewer still, even in America, take any notice of From the report of the United States Commission on Education we find that the course which this college professes to require extends over three years, but only twenty-two weeks in each year, while the more reputable colleges require thirty-five or forty weeks Its educational course would not pass muster in the very humblest qualifying body in the United Kingdom and, as for its examinations, 'the least said soonest mended' What of that? It is not the first time that a quack succeeded in gathering in a few gulls and a certain number of fees What is truly astonishing is that beside a number of ladies and ministers of religion, who do not count, Professor Dowden, Dr Chetwode Crawley, the Lord Mayors of Dublin, Liverpool and Glasgow, and Sir Henry Irving are advertised as having appended their names to Mrs Potts' manifesto It is true that these gentlemen, who ought to have known better, testified to nothing more than the genuineness, of which they could have no personal knowledge, of certain testimonials of American gushers and they expressed no opinion whatsoever as to the attainments of the lady or the propriety of her proceedings, but they must have known that their authority would be used as a guarantee for everything this quack said or did"

Bearing in mind that the above is written by a Londoner, it is about as correct as would be expected The chief unfairness of the article was in the caption reading "The Status of American Diplomates in this Country (England)," because it gives the impression that the cattle of the Potts variety are of the class of diplomate type referred to But let not that weary us—let us next send to the non-appreciative shores of Albion some of our surplusage of mind-healers, Christian scientists, bone-setters, cancer doctors, *et id omne genus* Albion scarcely yet knows what America can do for her

KENTUCKY STATE MEDICAL SOCIETY

It is eminently fitting that the fortieth annual meeting of the Kentucky State Medical Society should have been held in the historic town of Harrodsburg —the oldest in the State One of the largest meetings in its history was held there on the 12th 13th and 14th of June, under the Presidency of Dr J B Marvin, of Louisville Within a few miles of there, in 1809, was born McDowell, the father of ovariotomy Harrodsburg, itself, is the birthplace of three of the society's honored members Drs John G Cecil, Ap Morgan Vance, and L S McMurtry

Dr Henry Miller, now deceased, for many years an active and esteemed practitioner of Louisville, was born there, struggling in his early practice to make a success in his native town, afterward of national renown, and a President of the American Medical Association

The society was welcomed on behalf of the citizens, by Mr Ben Lee Hardin, in one of his characteristic speeches

The reports of the officers showed the society to be in a most prosperous condition Under the admirable rulings of the President, the papers were dispatched with much celerity, and the participants in the discussions held to their prescribed limit A discussion upon diphtheria occupied the first of the first day's session It was the sense of those participating in this discussion that the serum treatment of diphtheria was a valuable agent, and should not be withheld in the treatment of any case

Density of Population, their value as measures of the Health of Communities Population, Causes of Increase and Decrease of Population, Estimates of Population, and their relation to Births, Deaths and Migration Construction of Tables of Vital Statistics

Medical Jurisprudence—Examination viva voce Personal identity, Age, Sex Medico-legal relations of Pregnancy and Parturition Signs of Death, Wounds and other injuries, detection of Blood The Commoner Poisons (not including their detection by Chemic Analysis)

Law—Examination by paper Time one and one-half hours Greenleaf on Evidence Public Health Acts of the United States, and of the State where candidate lives Practice of Medicine Acts in the State where the candidate lives

Candidates are requested to send in their names to the Registrar at least a week before the first day of examination

The examinations will begin February 1

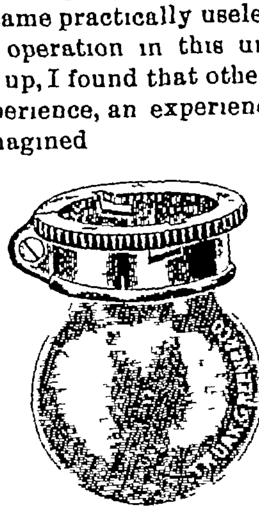
Other colleges will doubtless follow the example thus set, and there is little question but in a short time there will be educated Health Officers to supply all demands The time has come when State Medicine must be recognized as a special department of medicine

CORRESPONDENCE

A New Evacuator

DEXTER, IOWA, June 9, 1895

To the Editor—Having had occasion a few months since to use Bigelow's evacuator in doing the operation of litholapaxy, I discovered the instrument was sadly defective in the manner of the connection between the rubber bulb and the glass bulb for receiving the *débris*, it being made by securing the rim of the glass bulb to a metallic ring by means of plaster-of-Paris, this metallic ring being in turn adjusted to the metal connection of the lower end of the rubber bulb by means of a bayonet joint on one side only After evacuating about half of the crushed stone from the bladder, I found that there was a large leak from the plaster-of-Paris joint, as well as a smaller one from the bayonet joint above The leak increased so rapidly that in a few moments more the instrument became practically useless and I was compelled to leave the operation in this unfinished state In looking the matter up, I found that other operators had met with a similar experience, an experience about as trying as could well be imagined



I concluded that it was desirable to have an evacuator with this connection made of other material than plaster-of Paris, which is excellent as long as the instrument is kept out of the water, but rapidly becomes loosened when in actual use I, therefore, devised the connection below described and illustrated, which on subsequent actual use, I found to remain perfectly water- and air tight, regardless of the amount of pressure put upon it in manipulating the rubber bulb The improvement consists 1, in having two bayonet joints, instead of one, for making the connection with the ring on the rubber bulb, 2, and this is most essential—making a section of the metal ring for receiving the glass bulb, and arranging for the closing of this section by means of a screw running parallel with the upper surface of the ring Finally, in cutting on the lower inner surface of this ring, a deep groove to receive the flange of the glass bulb Insert the glass bulb, remove the screw with a screw-driver, or similar instrument, spread the ring sufficiently to allow the flange to be received within the groove, adjust a soft rubber washer between the glass flange and the lower side of the groove, close the ring by means of the screw, and we have a perfectly tight joint that will not be affected by water A second soft rubber washer is used between the metal ring of the rubber bulb, and the upper surface of the flange or glass bulb The device was nicely made for me by Chas Truax, Greene & Co, of Chicago

M G SLOAN, M D

More than Fifty Years

FULTON, N Y, May 8, 1895

To the Editor—Referring to the letter of Dr Colvin, of Clyde, N Y, in the JOURNAL of May 4, I have to say that I have practiced fifty-four years—fifty-two years of married life—fifty years' residence in the same house

I became a member of the Oswego County Medical Society in 1842 Attended fifty of its annual meetings in succession, a member of the New York State Medical Society in 1858, and a member of the AMERICAN MEDICAL ASSOCIATION ever since its second meeting in Philadelphia

CHAS G BACON, M D

PUBLIC HEALTH

Bacteria of Graveyard Soil—Dr E H Wilson, Bacteriologist of the Brooklyn City Board of Health, has submitted a report of his investigations on fragments of coffins sent him from some of the Brooklyn suburban cemeteries He says, in substance, that while these fragments contain, as might be expected, a large variety of bacteria, no pathogenic varieties have been found, that the popular idea that all bacteria are dangerous is a totally erroneous one The bacteria which are engaged in the process of destructive decomposition of the body are doing a beneficent work in returning to the soil the elements of which the body is composed, in a condition to be readily assimilated by the higher plants Investigation has shown that the soil of graveyards contain no more bacteria in proportion than the soil of other places, especially below a certain depth "In conclusion, I would say that while the presence of coffin fragments several years old is not to be commended from a bacteriologic point of view they are comparatively harmless, and only remind us more forcibly of the fact that it is the living and not the dead from whom we may expect harm in this matter"

To the Rescue of the Oyster—After all the recent abuse of that "child of the rock and of the hoary sea," the oyster, as an infection-carrier and as a "scavenger of the sea" it will be consoling next September to recall the good words spoken for the bivalve at a recent séance of the Paris Academy of Medicine M Chatin stated that for some time he had pointed out the richness of oysters in bromin, iodin and fluorin He wished now to make known the great quantity of phosphorus which oysters contain in an organic and, consequently, assimilable combination The Portuguese oysters are the richest of all in phosphorus Each of them contains very nearly one-twelfth of a grain of phosphorus, ordinary oysters have about one-third of this amount These mollusks are equally rich in iron, their brown color being due to diatoms A great number of infusoria on which the oysters feed are filled with these diatoms which are so rich in iron that the ash from burning them is of a deep red color M Gautier remarked that all sea food is very rich in phosphorus in the organic state thus cod liver oil contains phospho-glyceric acid besides its alkaloid M Le Roy de Mericourt stated that he had a long time ago indicated the service rendered by oysters in the alimentation of persons attacked with chronic diarrhea in tropical countries[1]

Septic Vaccine—Dr Gustav Futterer, Professor of Physical Diagnosis in the Chicago Policlinic communicates some rather alarming information concerning the vaccine points of commerce With all necessary aseptic precautions on his own part, he finds on bacteriologic investigation at least one kind of microörganism present on every point examined Some of these, it is true are of little importance but it will throw considerable light on the frequent untoward sequelæ of vaccination to learn that out of seventy five points obtained from different sources and submitted to detailed examination fifty five—or 73 per cent revealed the presence of pathogenic microörganisms the streptococcus aureus etc and ten—or 13 per cent—were infected with the streptococcus of erysipelas and phlegmon Dr Futterer announces that he is at present by experiment and practice trying to answer the following questions 1, which is the best way to disinfect these points and how may they be kept in an aseptic condition? 2, how should aseptic vaccine be kept and carried around for practical use? 3 how can septic vaccine be made aseptic and kept without impairing its properties as an effective vaccine medium? The last point must be well considered, since a vaccine that has been found to be aseptic once may not always be so and even if it is it can easily be contaminated by opening the bottle for use It would certainly be safer if a disinfecting agent was added that would not only destroy the germs already contained in the vaccine fluid, but also those entering later

A Board of Health Circular on Tuberculosis.—The Health Commissioner of Brooklyn, N Y Dr Z T Emery, has drawn up the following circular for the guidance of the laity in respect of the questions of household sanitation that are constantly arising in every large city

THE PREVENTION OF CONSUMPTION

Consumption is a dangerous, infectious communicable disease and can be prevented by simple and easy means of cleanliness on the part of those affected and those having the care of them It is transmitted, in the vast majority of cases from the sick to the healthy by means of the sputum or expectoration of those afflicted with the disease *It should be remembered that the dangerous element is the expectoration of consumptives*, and that if this is destroyed before it becomes dry, little danger is to be feared The expectoration should be received if the patient is confined to the house into cups containing carbolic acid (1 part of the acid to 20 of water), or if the patient is up and about, on pieces of cloth which should be saved and burned at the first opportunity This precaution is as necessary for the consumptive as for those about him, as many cases would get well if they would avoid reinfecting themselves Consumptives should not spit on the sidewalks, or in public conveyances or in places of public congregation Cases of consumption should be reported to the Health Department, not with a view of quarantining or otherwise interfering with them, but that the department may place in their hands simple instructions to prevent their communicating the disease to those around them and to assist in their own recovery Apartments which have been occupied by consumptives should not be occupied by others until they have been renovated They should be cleaned, scrubbed whitewashed painted or papered, as the case may be, before they are again occupied Bedding, clothing, carpets, rugs, etc, used by consumptives should be disinfected, preferably by the Health Department

A Russian Test of Vaccination—The St Petersburg correspondent of the London *Lancet* furnishes an abstract of a dissertation on smallpox and vaccination, presented to the St Petersburg Academy of Medicine last year which is interesting as much from the results set forth as from the rarity of Russian statistics on these subjects The author, Dr A N Sotin was led to collect his statistics in the following manner the [illegible] district of which he was in charge lay in the western corner of the Molog[illegible] district of the government of Yaroslavl Observing that an epidemic of smallpox was approaching from the East Dr Sotin personally examined every child under 14 years of age in his district before the disease arrived The total number of children examined was 12[illegible] distributed among [illegible] families in [illegible] villages He found that 1[illegible] had been vaccinated and had visible scars 7[illegible] children formed a second category of doubtful cases which were said to have been vaccinated but on which no scars were visible and 4[illegible] had never been vaccinated The smallpox arrived and a widespread [illegible] not very fatal, epidemic resulted It was then found that of the 1[illegible] vaccinated children only [illegible] or 1[illegible] per cent had contracted the disease of the 7[illegible] [illegible] 4[illegible] per cent suffered while of the 4[illegible] unvaccinated children as many as 2[illegible] or [illegible] per cent caught the disease In other words the unvaccinated suffered to an extent forty five times as great as the vaccinated Further it was observed that in 1[illegible] families all the children were unvaccinated and in these families if one child sickened with the smallpox the disease spread, with only seventeen exceptions, to every other child in the house On the other hand in houses where some children were vaccinated and others not the disease always attacked the last and the first escaped Dr Sotin believes that there is no danger from vaccination performed during a smallpox epidemic but that general vaccination will with certainty cut short an epidemic, and that the immunity following vaccination does not last more than eight years, at the end of which time revaccination is necessary

Health Reports.—The following health reports have been received by the Supervising Surgeon General M H S

SMALLPOX—FOREIGN

Argentine Republic Buenos Ayres March 1 to 31 12 deaths
Austria Buda Pesth, May 17 to 2[illegible] 7 cases 1 death
Belgium Antwerp, May 17 to 18, 3 deaths, Brussels May 18 to 25, 1 death
Bohemia Prague, May 18 to [illegible] 3 cases
Brazil Rio de Janeiro May 1 to 18 [illegible] deaths
Cuba Havana, May 31 to June 6 5 deaths
Egypt Cairo, May 6 to 13 5 deaths
England Liverpool, May 2[illegible] to June 1, 2 cases
Greece Athens, January 1[illegible] to May 28 147 cases, [illegible] deaths, Piraeus, January 16 to May 28, 189 cases 46 deaths
India Calcutta, April 27 to May 4, 98 deaths
Ireland Dublin, May 25 to June 1, 10 cases 1 death
Mexico Nogales, June 1 to 8, 1 case
Russia Batoum, May 21 to 28 17 cases, 1 death Odessa May 18 to 25, 6 cases, 1 death, Warsaw, April 18 to 25, 1 death
Turkey Constantinople, April 1 to 30, 62 deaths
Uruguay Montevideo May 4 to 11, 1 case

SMALLPOX—UNITED STATES

Colorado Pueblo, June 1 to 8, 1 case
Illinois Chicago, January 1 to April 30, 126 deaths
Indiana Evansville, June 11, 2 cases
Louisiana New Orleans, May 11 to 18, 8 deaths
Michigan Detroit, Battle Creek, Olivet, smallpox reported present June 1 to 8
Missouri St Louis, May 1 to 31, 26 cases, 7 deaths, June 1 to 8, 3 cases, 1 death
Pennsylvania Philadelphia, June 1 to 8, 8 cases
Ohio Cincinnati, June 7 to 11, 4 cases
Virginia Lexington, June 11, 9 cases (none since May 26), Buena Vista, June 14, 8 cases (none since April 20), Lowmoor, June 14, smallpox cases reported Staunton, April 28 to June 12, 105 cases, 5 deaths
Wisconsin Milwaukee, May 1 to 31, 10 cases, 1 death
West Virginia Wheeling, March 18 to June 15, 29 cases, 8 deaths

CHOLERA

Brazil Rio de Janeiro, May 11 to 18, 1 death
India Calcutta, April 27 to May 4, 71 deaths
Turkey Constantinople, April 1 to 30, 24 deaths

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[1] Le Bulletin Medical May 22 1895
[2] Chicago Medical Recorder June, 1895

YELLOW FEVER

Brazil Rio de Janeiro, May 4 to 18, 62 deaths, Santos, April 26 to May 3, 105 cases, 96 deaths

Cuba Havana, May 31 to June 6, 5 cases, Santiago de Cuba, June 1 to 8, 16 cases, 8 deaths

Mexico Mazatlan, May 20, yellow fever reported to be present, Vera Cruz, May 31 to June 6, 5 deaths

CONSULATE OF THE UNITED STATES

Athens, May 28, 1895

I have the honor to report that since the appearance of smallpox in Athens and the Piræus, about the middle of January, there have been in all 336 cases, 189 in the Piræus, 147 in Athens Of these, 249 had been recently vaccinated, and 37 in childhood Sixty-nine deaths occurred, 23 in Athens and 46 in the Piræus A large percentage of the deaths was of young children, or people of evil habits of life

There are now 26 patients in the hospital at Piræus, 69 in that of Gondé near Athens Only one or two cases have been heard of in the last two or three days Much credit is due to the authorities for their thorough and scientific handling of the epidemic I am, sir, your obedient servant,

George Horton, United States Consul

CONSULATE OF THE UNITED STATES

Nogales, Sonora, Mexico, May 20, 1895

I have the honor to inform you that reports are current in this vicinity, as well as in other portions of this State of Sonora, that at Mazatlan, a seaport city on the western side of Mexico (in the State of Sinaloa), yellow fever is now prevailing to a considerable extent, and that in some instances the disease has terminated fatally It is also reported that there have recently been two cases of the disease at the city of Guaymas, another Mexican seaport (by rail, some two hundred and sixty miles south of Nogales) I have been unable to verify the reports in either instance, but I am apprehensive that they are not without some foundation I am, Sir, your obedient servant, Frank W Roberts,

United States Consul

Rio de Janeiro, May 21, 1895

I have the honor to inclose report for the week ending May 18, 1895 There were 12 deaths from accesso pernicioso, an increase of 3, 30 from yellow fever, a decrease of 2, 4 from beriberi, a decrease of 3, 3 from enteric fever, a decrease of 1, 1 from measles, the same as in the foregoing week, 1 from cholera and 1 from cholerina, none in the previous week, 7 from choleriform diarrhea, an increase of 6, 1 from choleriform enteritis, and 1 from whooping cough, none in the previous week, 53 from consumption, an increase of 20 There were 358 deaths from all causes during the week, which is an increase of 32

While there is really no disease reigning considered here as epidemic, yet great caution is needed where there are so many different kinds of contagious affections, though in very small numbers for the population

Cholera I am a little surprised that a case of cholera, or as they call it here, cholera morbus, should be reported, as the disease appears to be finished in the places of its first appearance, and it is almost unheard of here now, but as you will see by the report choleraic diseases still occur The sanitary measures adopted for the ways of communication with the interior have been suspended as no longer necessary, but vigilance is still kept up

Yellow fever There is more of this disease here now than during the summer months, but the cases are scattered and it is now declining

Plate River Cholera has been officially declared extinct in Buenos Ayres, though cases appear in Montevideo The authorities in those towns have declared the Brazilian ports —except Santos—free from suspected disease, but they still disinfect ships arriving from Brazil

Respectfully yours,
R Cleary, M D
Sanitary Inspector M -H S

CONSULATE OF THE UNITED STATES

Foochow, China, April 30, 1895

I have the honor to inform you that the disease known as the "Hong Kong Plague" has made its appearance in Foochow, and is already established as an epidemic It is confined to the city of Foochow proper, most of the deaths from the disease occurring within the city walls near the eastern and western gates, respectively, but it is stated that several cases have occurred among the natives of a village situated on the Island of Nantai in the vicinity of the foreign settlement, though I am unable to say that the Nantai cases are real cases of the plague

There is no question or doubt about the epidemic in the city being identical with that which last year caused such mortality in Hong Kong, and in Canton and other southern Chinese ports The symptoms attending its appearance and progress unmistakably stamp it as the plague, and in the infected districts within the city the rats are dying in great numbers, just as has been the invariable rule wherever the plague has shown itself in the past

The health of the port, in general, as respects natives and foreigners has been exceptionally bad this year Some sporadic cases of cholera have already occurred, and it is possible that there will be suffering from an epidemic of cholera along with that caused by the plague

In a city like Foochow it is impossible to institute any sort of sanitary measures to prevent the spread of contagious diseases, or to even mitigate the suffering of the victims So, unless the present epidemic die out of its own accord, there is every prospect that misery and death will come to thousands of the one and a half millions of people living in the city proper and its immediate suburbs

At an early date I shall report more fully upon the situation

I have the honor to be, Sir,
Your obedient servant,
J Courtney Hixson, Consul

NECROLOGY

Frank Lyman Forsyth, M D, of Providence, R I, May 11, 1895 He was the son of Dr Francis Flint Forsyth, an eminent physician in Massachusetts, who was for many years one of the counsellors of the Massachusetts Medical Society Both father and son were members of this society, the son being also a member of the Rhode Island Medical Society and the American Medical Association He was born at Hampton, N H, Feb 13, 1854, and received his degree from the Harvard Medical College in 1877, after preparatory study at the Boston Latin School and the High School at Weymouth, Mass An appointment was soon obtained at the Rhode Island Hospital where he remained one year He supplemented his education at Harvard by a post-graduate course in 1891 His practice was large and successful and extended over a period of seventeen years, but his health began to fail nearly a year ago, and although the winter was spent in the South he passed away in eighteen days after his return He was interested in several fraternities, was a member of the I O O F, a past chief patriarch of Narragansett Encampment, and in 1887-88 was grand chancellor of the Grand Lodge of K of P of Rhode Island He was a Mason in Nestell Lodge, No 37, A F and A M., and a member of Providence R A Chapter, Providence Council, R and S M, and St John's Commandery, No 1, K T From 1886 until 1890 he was grand secretary of the Grand Clan of Rhode Island, O S C, and in 1890 he was elected grand chieftain of that body His widow survives him

Calvin Truesdale, M D, of Rock Island, Ill, died June 9 Dr Truesdale was born in Northern Ohio in October, 1822, and was consequently 73 years old He graduated from the Western Reserve Medical College in 1845 After practicing some years in Ohio, he came to Rock Island in 1854, and continued in the practice of medicine there from that time till his last illness, a period of forty-one years, years which brought to him success in his profession and a competency, beside the respect of the community and public and professional honors He was surgeon of the Rock Island division of the C, B & Q Railway, and one of the stockholders of the Rock Island Plow Company, beside being actively interested in the general welfare of the city of Rock Island During his residence there he was twice elected mayor of Rock Island, and in 1872 was a candidate for Congress He was spoken of a number of times later for like candidacy, being a man of acknowledged intellect and influence, and one whose loss will be mourned by many He was married in Ohio in 1851, and

Louisville Notes.

Kentucky School of Medicine —This institution has sustained a great loss in the death of the President of its Board of Trustees, Rev John A Broaddus, D P ,LL D Dr Broaddus was a man of great worth, a prominent educator, a prolific writer, and a great scholar, and there is no man in the United States whose death could cause more widespread sorrow in Louisville than the death of Dr Broaddus He was born in Culpepper County, Virginia, Jan 27, 1824, and died in this city March 16, 1895 As was chronicled in these columns recently, Dr Broaddus made an address at the opening of the Kentucky School of Medicine and Hospital, and dedicated it to the cause of science, and for the use of the sick poor

Death Report —For the past week there were 86 deaths reported Of these 23 were caused by pneumonia, 7 from bronchitis, 8 from consumption, organic disease of the heart 4, la grippe 2, cerebral meningitis 5, and there were 3 still-births There were 53 males, 33 females, 57 white, 29 colored, 53 single, 33 married Nine deaths occurred at the City Hospital

Matthews —Dr Jos M Mathews made the address before the Marion-Sims Medical College of St Louis, Mo , on the 19th inst , at their regular commencement

St Louis Notes.

The St Louis Medical Society —At the meeting on March 16 the society discussed a resolution introduced by Dr William Johnston at a previous meeting which urged the Legislature to pass the bill now pending for regulating the practice of medicine The bill provides that no one shall enter into practice who has not previously obtained a certificate issued by a State Board of Examiners, to consist of seven members, four of whom are to be regular practitioners, three homeopaths and one eclectic The society rejected the resolution, thus refusing to indorse the measure Under the scientific program, perishable specimens were submitted by Dr L H Laidley and by Dr Carson , Drs Frey and Pollak discussed the special features of the cases A paper on Ainhum, with a specimen, was presented by Dr A H Ohmann-Dumesnil, and Dr H H Summa reported an operation, illustrated with a specimen No reference was made to the proceedings of the Committee on Ethics in the Loftus-Marks case It is understood, however, that all the evidence has been heard, and that the committee is ready to prepare its final report

The Beaumont Hospital Medical College held its annual commencement exercises Thursday evening, March 14, at which seventeen graduates were granted the degree of M D

The Barnes Medical College held its third annual commencement March 14, graduating a class of sixty-four

The Missouri Medical College graduated a class of seventy on March 19

The Marion-Sims College of Medicine held its annual graduating exercises on March 18, conferring degrees on a class of fifty-four Dr J M Mathews, of Louisville, addressed the graduates of the Marion-Sims College on the evening of March 18

Judge Rassieur, of the Probate Court, on March 16, denied an application for an inquiry into the mental condition of Arthur Duestrow, on the ground that this question was pending in a criminal court The application was made at the instance of Dr A C Bernays, who sought in this way to hasten the settlement of a bill for over $15,000 for services rendered in attempting to save the life of the paranoiac's wife, for whose death Duestrow is now under indictment The question of the prisoner's insanity is still undetermined in the courts

The Present Missouri Legislature has passed the following bills relating to medical interests Making it a felony to detain a person alleged to be insane without examination by reputable physicians, raising the age of consent to 18 years, to prohibit the practice or teaching of osteopathy without diploma, admitting oculists, aurists and dentists to the class of "practitioners of medicine," within the meaning of the statute exempting persons in these classes from jury service, fire department duty, etc , providing for examination of candidates for license as pharmacists by the State Board of Pharmacy

The following bills have been defeated Turning Fulton Asylum over to the homeopaths, exempting medical practitioners of all kinds from jury, fire department and military service, to compel labeling of packages of food and drugs with name of all ingredients—a pure food bill, making it a misdemeanor for a druggist to substitute some other article than that named in the physician's prescription without formal permission

Washington Notes

Medical Society of the District —At the meeting of the society held on the 13th inst , Dr Fry reported a case of Cæsarian section, both mother and child saved, and a case of symphysiotomy, child saved and mother made a prompt recovery without any alteration in natural gait Both subjects brought out a full and interesting discussion Dr Glazebrook presented some interesting specimens which he had collected in the coroner's department, viz , stab wound of heart, severe wound of kidney from fractured rib, primary ulcer of stomach with perforation and fatal peritonitis, gunshot wound of spinal cord, endothelial sarcoma of vermiform appendix, and gave the histories of each An interesting discussion followed

The Washington Obstetrical and Gynecological Society —The two hundred and twenty-fifth meeting of the society was held on the 15th inst Dr Adams read the paper of the evening, the report of a case of croupous pneumonia complicating scarlet fever Dr Sprigg reported a case of nephritis

The Benefit for the Woman's Clinic —The directors and friends of the Woman's Clinic gave a very pleasant musical entertainment for the benefit of the Clinic on the 11th inst The friends of the hospital were out in full force and a good sum was realized This hospital and dispensary is conducted almost entirely by women physicians and is doing excellent work

Smallpox in the District —There were two new cases of smallpox discovered last week Both were children in the same family They were promptly removed to the hospital and are doing well

The New Smallpox Hospital.—The work on the new smallpox hospital will very shortly be begun The reduction in the appropriation from $30,000 to $18,000 will cause considerable delay and possibly some alteration from the original plans The Commissioners are considering the advisability of following the original plan as far as the appropriation will go, and asking Congress next year for sufficient funds to carry out the original designs

Report on Sewers in the District —In compliance with a Senate resolution of February 22 last, the Commissioners have had prepared considerable interesting data relating to the paving of streets, the laying of sewer and water mains, etc , in the limits of Washington and Georgetown A list of streets showing the number of linear feet of each, wholly or partially supplied with sewer facilities, has been prepared by Captain Beach There are 102,300 feet of unsewered streets running east and west, and 72,250 feet partially sewered Of streets running north and south, including Georgetown, there are unsewered 108,350 feet, and partially sewered 51,450 feet In Georgetown there are 5,200 feet of unsewered sion is due to an encounter with various evil omens, including a wild ass at the Zoological Gardens which brayed without ceasing at his approach and refused to be comforted *Similia similibus curantur*

Thinking with the Finger Tips —According to a writer in the *Arena* the coming man will assuredly perceive and think in every part, from his head down to his feet He bases this assertion on what, he says, may not be so generally known—that recent post-mortem examinations of the bodies of the blind reveal that in the nerves at the end of the fingers well-defined cells of gray matter had formed, identical in substance and in cell formation with the gray matter of the brain What, he asks, does this show? "That a man can think, not alone in his head, but all over his body, and especially in the great nerve centers like the solar plexus and the nerve ends on the palms of the hands and the soles of the feet"

Comparative Action of Cadmium and the Zinc Salts —Athonasiu and Longlois have reported the results of their investigations of cadmium and the zinc salts to the Paris Biological Society By the comparative study of the physiologic action of the sulphates of zinc and of cadmium on lactic fermentation and on higher organisms they have confirmed Richet's law that "metals of the same group act in accordance with their atomic weight" The cadmium salts are, at equal weight, more toxic than the zinc—Cd-112 Zn-65 Lactic fermentation is stopped by 2 per cent of cadmium sulphate and 1 6 per cent of zinc sulphate The frog's heart is arrested with 0 105 of cadmium and 0 150 of zinc per kilo of the animal[1]

Cattle Plague in Russia —According to statistics published by the veterinary section of the Russian Ministry of the Interior, says Consul-General Karel in a dispatch dated St Petersburg, March 23, 1895, the cattle plague (*Rinderseuche*) appeared in the northern Caucasus in January, 1895, causing a mortality of 375 head, distributed among the following districts in the Kuban district, 134 head, in Ter district, 124, and in the government of Stovropol, 117 No case of the disease appeared in the interior of European Russia On the other hand, the Siberian plague was brought into twenty-four governments of European Russia, and 232 head of cattle died in the following governments in Samara, 60, in Astrakhan, 38, in Tula, 15, in Uralsk, 13, in Poltova and Penza, 11, in Kharkov and Kherson, 10 In the Caucasus, only 2 head of cattle died of the same disease—in the district of Ter —U S *Consular Reports*, May, 1895

Reflex Fatality after Intubation —According to the report by Dr Duran, of Barcelona, Spain, in a medical journal published in that city, sudden death may result from intubation of the larynx "The patient was a girl about 3 years of age, brought to the hospital a few days after being attacked with pharyngeal diphtheria The posterior portion of the mouth, the uvula and the fauces, as well as the nasal fossæ, were invaded by false membrane Other treatment not succeeding, Aronson's antitoxin was administered, and as the blood showed a deficiency of oxygen, by evening the physician decided to perform intubation His first attempt was not successful, but the second time the tube was introduced easily and without violence For several minutes the child breathed more freely and fully, but suddenly the facial muscles contracted, the eyes opened widely, a slight convulsion occurred and death followed Traction of the tongue, artificial respiration and ether injections were without avail, death having been instantaneous The autopsy showed no lesion of the organs, and the fatal termination is attributed to cardiac syncope, due to a reflex originating in the larynx"

Source of Error in Fehling's Test for Sugar —Lafon report the case of a woman who excreted 183 grams of sugar i twenty four hours, the sugar disappeared after som months of treatment, and the patient had been taking medicinal doses of sulphonal (0 75 to 1 gram) for two months I the urinalysis, after ingestion of sulphonal began, Lafo always found a decided precipitate of yellow oxid of coppe by boiling with Fehling's solution, which, without any othe precautions would indicate the presence of sugar Thes same specimens of urine examined by the polariscope gav no deviation to the right, characteristic of diabetic sugar but, on the contrary, turned slightly to the left almost inappreciably Some twenty specimens of urine were examine and in all Fehling's solution clearly showed the suppose presence of diabetic sugar while none was present by th polariscopic test The reaction of Fehling's solution is no due, at least in the majority of cases, to the products of th transformation of sulphonal in the economy, for the additio of a medicinal dose—1 gram per liter—to urine absolutel free from sugar gives exactly the same reaction As sulphonal is somewhat largely used, this fact, which is not mentioned by any writer on the drug, is worthy of note[1]

Physicians on the Canadian Border —Consul Twitchell, o Kingston, Canada, writes to the Department March 27, 1895

"I am informed through the public press—the informa tion being verified by letter—that physicians living sout of the Canadian boundary have recently been prohibite from attending patients living in Canada I presume tha the ostensible reason for this prohibition must be the allege inferiority of the medical education of these practitioner and the consequent danger to the Canadian people Of th professional competency of physicians on the American sid of the border, I know but little, but the indifference of som of the State governments in the United States to the qualifications of their medical practitioners is in marked contras with the action of the Province of Ontario For a numbe of years the United States seems to have been the dumpin ground for medical students who did not apply for or faile to pass the examination required to qualify them to practic in Ontario If this matter were fully understood by ou State governments, I have thought that the instinct of sel protection, combined with State and National pride, woul cause them to require as high a standard of proficiency t practice medicine in their States as is required in Canada During the year 1894, one hundred students graduated fro the different medical colleges of Ontario Of these, fifty three passed the examination required by the medical council for the practice of medicine in Canada, leaving forty seven unaccounted for I think I can safely venture th opinion that if the passage of the examination of the medical council had been required to practice in the Unite States, forty-seven more medical students would have fitte themselves for the examination"—U S *Consular Report* May, 1895

The Peabody Buildings of London —From *Public Health* w learn the chief facts relative to the present workings of tha notable benefaction, of the American-born banker, Georg Peabody, to the working people of London The following i an abstract from the last annual report on the "Buildings" 'From the report of the trustees for the year 1894, it appear that at the end of the preceding year the trustees had provided for the artisan and laboring poor of London 11,26 rooms besides bath-rooms, laundries and lavatories Thes rooms comprised 5,073 separate dwellings, viz , 75 of rooms, 1,783 of 3 rooms, 2,397 of 2 rooms, and 818 of 1 room Since then 48 additional dwellings, containing 110 room have been occupied, bringing the total to 5,121 dwellings, containing 11,371 rooms The number of persons in residenc on December 31 last was 19,918 The average weekly ear ings of the head of each family in residence at the close the year was £1 3s 5d The average rent of each dwelli was 4s 9¼d per week, and of each room 2s 1¾d The re in all cases includes the free use of water, laundries, scu

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[1] Le Bulletin Medical, May 22, 1895

[1] Le Bulletin Medical, May 8, 1895

141 Cystitis, same as 50
142 Enuresis
143 Retention of urine
153 Hydrocele
154 Other diseases of this class

(F) Diseases of the Lymphatic System and Ductless Glands

155 Adenitis, excluding 34 and 37, same as 52
156 Lymphangeitis, same as 51
157 Splenic hypertrophy
158 Other diseases of this class

(G) Diseases of the Muscles Bones and Joints

159 Muscular contraction
160 Muscular rheumatism and myalgia
161 Whitlow, same as 57
162 Osteitis and results
163 Periostitis, excluding 34 and 57
164 Arthritis, excluding 27
165 Arthritis, chronic rheumatic
166 Bunion
167 Synovitis
168 Other diseases of this class

(H) Diseases of the Integument and Subcutaneous Connective Tissue

169 Corns and warts
170 Ingrowing nail
171 Chilblain
172 Abscess, same as 53
173 Furuncle, same as 54
174 Carbuncle, same as 55
175 Ulcer
176 Hospital gangrene, same as 56
177 Dermatitis from poisonous plants
178 Erythemata
179 Psoriasis
180 Prurigo and lichen
181 Herpes
182 Eczema and pemphigus
183 Impetigo and acne
184 Scabies, same as 39
185 Dermatophyti, same as 40
186 Other diseases of this class

(I) Diseases of Organs of Special Sense

(a) Diseases of the Eye

187 Lids, diseases of
188 Lachrymal apparatus, diseases of
189 Conjunctivitis, acute
190 Conjunctivitis, chronic
191 Corneitis
192 Sclerotitis
193 Choroid, diseases of
194 Iritis
195 Retinitis
196 Snow blindness
197 Asthenopia
198 Cataract
199 Glaucoma
200 Amaurosis
201 Night-blindness
202 Other diseases of the eye

(b) Diseases of the Ear

203 Diseases of external ear
204 Diseases of the tympanum
205 Diseases of the middle and internal ear
206 Earache
207 Deafness

(c) Diseases of the Nose

208 Nasal catarrh chronic
209 Nasal hemorrhage
210 Nasal polypus

IV—ACCIDENTS AND INJURIES

(A) General Injuries

211 Burns and scalds, general
212 Crushing
213 Drowning
214 Exhaustion from fatigue or exposure
215 Explosion
216 Freezing
217 Hanging
218 Insolation
219 Lightning
220 Starvation, exclusive of disease
221 Suffocation, exclusive of disease and 217
222 Venomous bites, stings and wounds

(B) Injuries to Special Parts

228 Abrasions and blisters, mechanical
224 Burns and scalds local
225 Compression of the brain
226 Concussion of the brain
227 Concussion of the spine
228 Contusions and sprains
229 Dislocations
230 Foreign bodies, presence of
231 Fracture, exclusive of gunshot
232 Frostbite
233 Hernia, inguinal
234 Hernia, others
235 Orchitis from injury
236 Strain, muscular
237 Wounds, contused
238 Wounds, incised
239 Wounds, lacerated
240 Wounds, punctured
241 Wounds, gunshot
242 Secondary results of local injury
243 Other local injuries

V—UNCLASSIFIED

244 Malingering
245 Under observation or not diagnosed
246 Homicide
247 Suicide
248 Self maiming
249 Judicial execution

Medical officers in recording the causes of admission to Sick Report will make use of the nomenclature given above in all cases for which a specific title is provided Experience has shown that this list includes most of the causes of disability likely to occur in Army practice In recording cases for which a title is not specially provided, as for instance those which in a consolidation of the statistics would be tabulated under "Diseases of the mouth and tongue,' 'Diseases of the external ear," etc or thrown among "Other diseases of this class ' *such terms will be used as will briefly and accurately describe the disease* or injury, while conforming as far as possible to the nomenclature generally accepted by the profession Medical officers will report in this way, also when the cases are to be consolidated on the classified list under a generic term, as in certain of the diseases of the skin

In all cases in which the cause of admission is a local manifestation of a general affection the character and locality of the one and the nature of the other should be stated

The organ or part affected should be specified when the name of the morbid condition fails to indicate it as in paralysis, aneurysm ulcer herpes, etc as also in inflammations as adenitis, osteitis arthritis, synovitis, etc and in local injuries, as abrasions, burns, contusions, dislocations etc

Inflammations should be reported as acute or chronic The surgical characteristics of wounds, fractures, herniæ etc, should be stated, and in cases of poisoning the name of the poison should be given

Nothing in this circular is intended to relieve medical officers from the duty of recording the details of cases as required by paragraph 26, Circular S G O May 11 1893

Geo M Sternberg, Surgeon General, U S Army

Approved
Daniel S Lamont, Secretary of War

Appropriations for Marine-Hospital Service, 1895

For marine hospital at Boston, Massachusetts For invalid elevator, one thousand dollars isolation ward, two thousand dollars in all, three thousand dollars

For marine hospital at Chicago, Illinois For extension to hospital buildings, ten thousand dollars

For marine hospital at Cincinnati, Ohio For steam laundry plant two thousand seven hundred dollars

For marine hospital at New Orleans, Louisiana For new laundry and attendants' building, five thousand dollars

For marine hospital at Wilmington, North Carolina For increase of hospital facilities by construction of new ward, seven thousand dollars,

Quarantine Stations

For quarantine station, Reedy Island Delaware River For improvement of grounds to protect from overflow, four thousand two hundred dollars

For quarantine station, Delaware Breakwater, Delaware For naphtha launch for boarding vessels, four thousand dollars

For quarantine station, Brunswick, Georgia For completing addition to ballast wharf, three hundred dollars, ballast cars and tracks, three hundred dollars, hoisting engine, seven hundred dollars, raising trestle, two hundred and fifty dollars, in all, one thousand five hundred and fifty dollars

For quarantine station, South Atlantic For hospital barge (alteration to steamers), one thousand dollars telephone, three hundred and fifty dollars, in all, one thousand three hundred and fifty dollars

For quarantine station, San Francisco, California For naphtha or steam launch, three thousand dollars, cistern for water supply, one thousand two hundred dollars, in all, four thousand two hundred dollars

Quarantine Service

For the maintenance and ordinary expenses, including pay of officers and employees of quarantine stations at Delaware Breakwater Reedy Island Cape Charles and supplemental station South Atlantic Station (Sapelo Sound) Southport, Brunswick, Key West, Gulf, San Diego, San Francisco, and Port Townsend, one hundred and twenty five thousand dollars

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Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department, U S Army, from March 9 1895 to March 15, 1895

Major Charles L Heizman, Surgeon U S A (Ft Douglas, Utah) is granted leave of absence for one month, to take effect about March 10, 1895

First Lieut George D De Shon Asst Surgeon, is relieved from duty at Ft Logan, Colo, and ordered to duty at Ft Douglas, Utah

Capt Freeman V Walker Asst Surgeon, is granted leave of absence for one month, to take effect upon his relief from duty at Ft Trumbull, Conn

Capt Paul Clendenin Asst Surgeon leave of absence granted for *seven days, is extended twenty one days The Attending Surgeon at* Boston, Mass, will attend the sick at Ft Warren, Mass, during the absence of Captain Clendenin

Navy Changes Changes in the Medical Corps of the U S Navy for the week ending March 16 1895

Asst Surgeon L L Young, detached from the Naval Hospital, Norfolk Va, and wait orders

Asst Surgeon Ammen Farenholt, ordered to the U S S ' Baltimore "

Marine-Hospital Changes Official list of changes of stations and duties of medical officers of the U S Marine Hospital Service, for the fifteen days ended March 15, 1895

Surgeon John Godfrey detailed as chairman of board for physical examination of candidates revenue cutter service, March 6, 1895

Surgeon Fairfax Irwin, to inspect Cape Charles Quarantine Station, March 9 1895

Surgeon F W Mead detailed as chairman of board for physical examination of candidates, revenue cutter service, March 6, 1895

P A Surgeon A H Glennan, to report at Bureau for special temporary duty, March 12, 1895

Asst Surgeon C H Gardner, to proceed to Angel Island Quarantine Station, for temporary duty, March 4, 1895 Detailed as recorder of board for physical examination of candidates, revenue cutter service, March 6, 1895

Asst. Surgeon W J S Stewart, detailed as recorder of board for physical examination of candidates revenue cutter service, March 6 1895.

Asst Surgeon J H Oakley, detailed for duty on revenue steamer ' Rush " March 13, 1895

Asst Surgeon H S Cumming, *to proceed* to Boston, Mass, for temporary duty, March 6, 1895

LETTERS RECEIVED

Ashmead A S, Philadelphia, Pa, Atkinson, W B, Philadelphia, Pa; Alta Pharmacal Co St Louis, Mo

Bounnell, H M, Waynetown, Ind Baskett, J N (2), Hannibal Mo, Baxter W E Bangor, Me Brown, Warren, Tacoma Wash, Biddle, Jas G, Philadelphia Pa

Clarke The Robt Company, Cincinnati Ohio Connor Leartus, De*troit*, Mich Crothers T D Hartford, Conn, Corr, A C (2), Carlinville, Ill Coleman, W F Chicago, Ill

Dry Extract Co, Janesville, Wis

Franklin, C P, Philadelphia Pa Freeman, Wm Madison, Ind Frink Geo K, San Francisco Cal, Fuller, C H Advertising Agency, New York N Y

Guild C H & Co, Boston, Mass Gallup, Benj E (2) Chicago, Ill

Hubbard T B (2), Toledo, Ohio Heuel E New York N Y Howe, Lucien Buffalo N Y Hummel, A L, Philadelphia, Pa, Haughton R. E Midland, Texas

Ingals, E F Chicago Ill

Jackson Edward Denver Colo

Krotoszyner M, San Francisco, Cal

Lanphear, E, St Louis, Mo Leeds, Norman, Bellmont, Ill, Lord & Thomas Chicago Ill

McKennan, H Paris Ill Moffitt West Drug Co, St Louis, Mo, Morris, Malcolm London Eng McMurtry, L Louisville, Ky, McDougal J G New Lexington, Ohio Moyer, H N, Chicago

New York Academy of Medicine, New York, N Y

Obetz H C, Detroit, Mich

Penfield R C New York N N

Rand D H, Portland Ore Ricketts, B M Cincinnati, Ohio

Spofford A R, Washington, D C, Stevens, A J, Malden, Mass Savage, G C Nashville Tenn

Treat, E B, New York, N Y, Trimble, J R, Baltimore Md, Thomas, C P Everett Wash

Western Publishing House Chicago, Ill Warner W R & Co, Philadelphia, Pa Wandless, H W Dallas Texas, Woodbridge, J E, Youngstown, Ohio in a criminal trial, whether that information be in the nature of expert evidence or not He can not be required to make any examination, nor can he be compelled to attend the trial, and listen to the testimony, that he may be better enabled to give his opinion as an expert For any service of this kind he may demand extra compensation But such information as he already possesses, that is pertinent to the issue, he can be made to give, whether such information is peculiar to his trade or profession or not There is very little probability of any great hardship being imposed on physicians by reason of this rule The subpœnas for witnesses are under the control of the court, and, as there are physicians in almost any town or village in the State, it can not often be necessary for a court to compel one to attend beyond the limits of the county in which he practices, for the purpose of testifying as an expert, unless he is also a witness to other facts material in the case

Insolation, in Parallel Columns—A daily newspaper of our acquaintance contains, side by side, the treatment of sunstroke in a homeopathic and in a physiologic (*i e*, "regular") hospital In order that our readers may have an opportunity to choose between the two methods, we print them below in parallel columns That no feeling of prejudice may affect your choice we will not attach any name to either column The spokesman in each case is the house surgeon, and his words have been modified only slightly and for the convenience of comparison solely

HOW INSOLATION IS TREATED AT TWO HOSPITALS

AT "A" HOSPITAL	AT "B" HOSPITAL
"Ice is the quickest and most effectual means of restoring a person suffering from insolation We have a bath tub on wheels, filled with water in which the patient is placed after being stripped of his clothing Ice is packed around him and an ice cap is placed on his head We keep careful watch and take the temperature frequently to prevent it from running down too low When we get the temperature down to 103 or 104 degrees we put him on a bed protected by a rubber sheet and place over him a sheet wrung out in ice water The ice cap is kept at his head and we rub him with lumps of ice until the temperature is brought down to normal In mild cases we do not use the bath tub and ice pack simply the ice cold sheet and the rubbing with ice, and in some cases only the sheet When the action of the heart is weak we use hypodermic injections of strychnin, digitalis, whisky or brandy We do not resort to bleeding except in very extreme cases, nor do we use any internal medicines"	"The refrigerant treatment is carried out in an outer corridor on the first floor, where there is plenty of space for the air to circulate A portable bath tub, half filled with water, is kept here The water is at a temperature of 60 or 70 degrees, but can be brought down to ice cold temperature in two or three minutes When a patient suffering from insolation is brought in, he is laid in this tub, ice is put about him and a rubber ice pack is placed across his head and temples When the heart action is very weak, hypodermic injections of nitro glycerin are administered, and belladonna or glonoin is administered internally Bleeding is sometimes resorted to, though rarely A current of air is kept up by the use of fans When the temperature of the patient has been brought down to normal, he is removed to a ward, when for a time, to prevent a relapse, he is kept cool by means of the ice pack at the head"

One of the above surgeons, which one we will not say, volunteered a further remark, which can not be made to fit a parallel, and which will be readily understood by all our regular readers, to the effect that it would "never do to pack hot bottles about a man who is unconscious and whose temperature is 107 or 108 degrees Ice is the only thing to be used and it is my belief that it would be of great avail in the treatment of cases of pneumonia and typhoid fever Many physicians, however, are opposed to the treatment of such cases by resorting to ice-packing to reduce the temperature, probably because they fear it may not be properly used and therefore they resort to the application of internal medicines to reduce the heart action"

Indications and Contra-indications for Lavage of the Stomach—At a late meeting of the Paris Therapeutical Society, M Ferrand announced that he had communicated to the Hospitals Medical Society the case of a young girl attacked with hematemesis who died from peritonitis, and the necropsy showed not ulcer of the stomach, but some simple ulcerations on the prominent borders of the mucous folds In that patient he had successfully used lavage of the stomach with an infusion of coca leaves "This is my usual practice," he said, "for I see the advantages of slightly anesthetizing the gastric mucous membrane and, by leaving some of the liquid in the stomach, getting the benefit of absorption of a tonic and astringent agent In ulcer of the stomach, on the contrary, lavage is dangerous, even when practiced between the attacks of hematemesis The cold water used in lavage has been accused of producing tetany, but I have never seen any untoward effect from its use, moreover its action is most favorable It lessens the irritability of the gastric mucous membrane and the tendency to vomit, and acts after the manner of hydro-therapy in general on the sensibility and innervation of the stomach Exception must be made of those subjects naturally predisposed by their nervous condition and who are affected by it as by any other excitation The treatment is not to be blamed in such cases but the temperament of the patient" M Blondel believed that the nervous condition of certain patients was a contra-indication of gastric lavage, sometimes transient, but often serious In a hysterical patient, with complex gastric symptoms and almost incoercible vomiting, he essayed lavage, as soon as the liquid reached the stomach, the patient lost consciousness and fell into a sort of somnambulistic state lasting two hours On a second trial there was the same result, so the treatment was abandoned The gastric crises and vomitings disappeared as if by magic after the vomiting up of a fine specimen of *Ascaris* M Ferrand in reply said that like many physicians, he had also seen nervous symptoms almost amounting to hystero epilepsy In M Blondel's case he saw a confirmation of his own remarks Lavage of the stomach is a genuine minor operation, and when it is practiced for the first time, some precautions are necessary —have the subject reclining, etc In M Bardel's opinion gastric lavage is not always safe by any means When the method was first introduced, Dujardin-Beaumetz and Debove had accidents At the Hôpital St Antoine, in the former's service the unfavorable cases were one in three It has been abandoned in that service in tubercular cases for lavage irritates the stomach so that the meal following is rejected In such cases, Beaumetz made use of *gavage* with a catheter which is always well borne In short, gastric lavage has been too much abused, the only genuine indication for it is the existence of putrid gastric fermentation with formation of toxins In other conditions, M Ferrand thought it was useless when it is not dangerous M de Cresantignes said there was another condition in which lavage gave undeniably good results In dyspeptics with secretion of great quantities of mucus, the patients, who are hypopeptics or even apeptics, sometimes have a stomachal digestion nearly or quite *nil*, and it is impossible to relieve them without evacuating the mucus by lavage [1]

Physicians can not Make Disclosures in Actions for Services—The New York Code of Civil Procedure provides that "a person duly authorized to practice physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity and which was necessary to enable him to act in that capacity" In an action brought to recover for professional services rendered as a physician and surgeon, after the doctor had testified that he was a physician and surgeon, and as such was called upon by the defendant to treat him, he was asked to state what the defendant said to him about his physical affliction This was objected to as incompetent and immaterial, upon the ground that the defendant, in making the statements to the witness, made them to a practicing physician in his professional capacity, and that they were necessary to enable the physician to act in that capacity, etc The objection was overruled, and the witness was permitted to answer, giving an account of a secret disease disclosed by the defendant to him which he subsequently treated But the general term of the Supreme Court holds (Van Allen v Gordon, decided Dec 27, 1894) that this was an error, and reverses the judgment of the lower court It says that it can see no escape from the provisions of this section of the code It does not understand that the defendant had in any manner waived its provisions He was sued, and was brought into court without his consent

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[1] Le Bulletin Medical, May 15, 1895

I am sorry to say, played an important part If the complaint was obstinate in yielding to the ordinary methods of treatment the fees would not only be increased, but the patient would be taken into a temple, there to be deluded into the belief that he must be purified by prayer, sacrifice and offering to the gods, before relief would come The imagination of the patient played an important part, and if the ordinary treatment was slow in producing healthful results the priests would resort to the use of snakes and non-poisonous serpents that had been tamed for the occasion, and these horrible creatures were made to play an important part in the healing art, by causing dreams and impressions upon the minds of the deluded and ignorant patients

As we turn the searchlight of investigation into the perspective of the remote ages of antiquity, seeking for truth and knowledge as to the early beginning of the science of medicine, we find helpful authority in the Bible, as also in heathen mythology Do we not recall the words of Job, spoken to his tormentors "Ye are forgers of lies, ye are all physicians of no value" And there is Jeremiah the prophet, lamenting over the condition of his people, and exclaiming "Is there no balm in Gilead, is there no physician there? why, then, is not the health of the daughter of my people recovered?" We read in the Scriptures that Joseph commanded his servants and physicians to embalm him, this being about 1700 years B C Thus it is shown that the Egyptians possessed men who practiced the healing art and embalmed the dead, both of which must have required a crude idea of general anatomy

It is to Greece, the land of art, that much of the ancient history of medicine can be traced, just as she furnishes every other art with the same historical advantages Of the early physicans, Æsculapius is the most famous By some he was considered the son of Apollo A number of the cities of Greece contended for the honor of his birthplace as they did for that of Homer Æsculapius, owing to his learning and wide knowledge of the science of medicine was given the title of the "God of Medicine" And there was Hippocrates, a great physician and philosopher, who was born in the year 460 B C, and it is said lived a century Because of his great learning and his wonderful discoveries in the field of medicine, and the fact that it is said that surgery was first practiced by him, he has been crowned the "Father of Medicine"

Galen was the most eminent physician during the second century, and the people had such great faith in his teachings that they were as a guiding star to the healers of the sick for a thousand years following The creeds of Hippocrates and Galen were accepted by the medical profession down to the time of that bold "Prince of Empirics," Paracelsus, born in Switzerland in the year 1493 He was highly educated and made a Professor of the School of Medicine at Basel, and while occupying this place, with great solemnity burned the books of Galen, declaring at that time that he had discovered the "elixir vitæ," by which life might be prolonged indefinitely He was nothing more or less than a charlatan, practiced the vilest arts, and being dissipated in his habits died at the age of 48 years

Of more modern physicians, William Harvey will be recalled as the one, who, in 1616, demonstrated the circulation of the blood There is John Hunter, the famous anatomist, Edward Jenner, an English physician who made himself celebrated by the discovery of vaccination as a preventive for that dreadful disease, smallpox This discovery was made by Jenner in 1776 while in the Alps watching the maids milking the cows On the cows' udders were sores, likewise on the hands of the maids, and while the smallpox was raging in the neighborhood, the milkmaids were free of the disease Jenner reasoned that the women had been inoculated with the "cowpox" which proved a prevention to the more terrible disease, smallpox Pasteur, the great French scientist, gave to the world in recent years a preventive and cure for hydrophobia Koch, the renowned German physician, discovered a "lymph" or tuberculin for the cure of tuberculosis Americans point with pride to Dr Samuel D Gross, the "Nestor of American surgery" There is Dr Behring, a German physician and student of Dr Koch, who is credited with giving suffering humanity the "serum" or "antitoxin," as a prevention and cure for diphtheria This discovery occurred but a few months since Thus I could continue to name the illustrious descendants of Æsculapius who adorn the pages of ancient and modern medical history

If, when Paracelsus proclaimed to the world his discovery of the "elixir vitæ," he had not in fact given to mankind a nostrous humbug, but a blessed boon, for indefinite continuity of good health and life, we should have but little use for the physician of to-day It seems that the Almighty, in His inscrutable wisdom did not intend to confer upon a human being a power, divine in its character and effect While such a blessing as an "elixir of life" has not come to us through human instrumentalities, let us not rail against the Divine will While we consider the wonderful advancement in the sciences of medicine and surgery, the thousand and one discoveries for the amelioration of suffering humanity, it is as little as we can do to offer a thankful prayer to the Giver of All, for these rich blessings to mankind

How true are the words of that Latin maxim "*Mens sana in corpore sano*," "a sound mind in a sound body" While the stability and maintenance of government depends upon the intelligence and virtue of its people, it must not be forgotten that the health, strength and physical development of the coming generations must be as jealously guarded In the early days the Romans were so ambitious to have only the finest specimens of manhood that the strictest laws were enacted relative to marriage, the weak and ill-formed were absolutely prohibited from entering into the marriage state, and only those possessing perfect health and strength were allowed to become the fathers and mothers of the warriors, statesmen and philosophers of those times

In our day, while no such marital restrictions surround the people, all nations are taking advanced steps in the direction of prevention of disease, as far as possible This is exemplified in the laws of quarantine at our seaports, the establishment of State boards of health, city sanitation, the power given to the health officer and local authorities to destroy buildings, fill up ponds or do such other acts as may be necessary to stamp out the hotbed of disease, and thus prevent the spread of a pestilence It is by such heroic means that an epidemic, which if unchecked, would carry death and destruction throughout the land, is beyond, but they often contain scattered bits of truth which are the birthright of every member of the medical profession who prefers to live his life in the open fields of rational medicine"

The suggestion contained in the following paragraph might be very profitably adopted by some of those who are not members of this year's graduating class

"The discontent and nervous unrest of the American largely depends upon the teaching that men are born equal and that to labor is to succeed It is not true Genius is not, as has been asserted, the power of work, though the power of work may be necessary for the development of genius I have watched some generations of young lives seek their level, rising and falling in the world, and have always found that it is the man who takes care of the moments who steadily climbs upward The talent for finding work is necessary and good, but it must be supplemented by the talent for completing work What the world wants is men who have the talent for getting things done"

A portrait of Prof H C Wood was presented to the University by the Horatio C Wood Medical Society, the presentation being made by J Claxton Giddings Judge Pennypacker accepted the gift on behalf of the Trustees A portrait of the late Dr William Goodell was presented, on behalf of his family, by Dr John Ashhurst Jr, Barton Professor of Surgery and Professor of Clinical Surgery It was received on behalf of the Trustees by Horace Howard Furness, Ph D, LL D

A bust in bronze of the late Dr Joseph Leidy, who for nearly forty years was Professor of Anatomy, Zoology and Comparative Anatomy in the Medical School, was presented by Dr Harrison Allen and received by Mr Walter George Smith, who said

"The name of Joseph Leidy is world famous among men of science, and it is one of the glories of the University of Pennsylvania that he was her son For half a century his name and work were associated with her It is fitting, therefore, that this image of his strong and benevolent head should have its niche in her halls On behalf of the Board of Trustees I am deputed to accept with grateful thanks this memorial of a man whose fame is her pride, whose works in science were so often carried on in her laboratories and lecture rooms, whose character has set its seal upon so many of her graduates Such a man, even among the choice spirits whom it is the peculiar advantage of a seat of learning to gather from the common walks of life, is not often raised up to show by word and example the power of industry and genius Let his career teach us a lesson that, short as is the span of earthly life, it suffices to work out some of the problems of nature, to learn something of the depths of the riches of the wisdom and of the knowledge of God, how incomprehensible are his judgments and how unsearchable are his ways

"It has been finely said by a living English poet that human pleasures in almost all the relations of life, even the purest and most unselfish, are always *mixed with pain*, and therefore nature itself shows us that they are given rather for our discipline than for a complete satisfaction But the study of nature herself is one of unmingled pleasure, none but the earnest and most encouraging emotions follow from the knowledge of her phenomena, whether they be sought in the animate or inanimate works of the Creator's hand As we contemplate the results of Leidy's life and follow in imagination 'the patient search and vigil long' with which he gave himself over to the study of nature's mysteries, we may become better and more hopeful men He truly said of himself that he knew a little of natural history, and proposed to teach others a little of that little 'Gladly wolde he teche and gladly learne' With the true spirit of true science the vastness of his acquirements made him more humble, for he knew that, however profound a knowledge he might attain to, he must ever stand confronted with mystery, mystery unsolvable by human effort alone It is given to but few men to accomplish so much as he did, but it is given to every true man and true student to take up his allotted work in the same spirit of patience and of industry

"Far away from the city of his birth his life's work and his affection, there rises a mountain that lifts its head into the clouds, a noble monument of nature, and to that mountain has been given the name of Leidy As it towers, a landmark among the forests and plains of the West, so will his fame stand out grand and beautiful in the minds of students who love nature and seek to find something pure and ennobling in the smallest, as in the greatest of her works"

THE PUBLIC SERVICE

Army Changes Official list of changes in the stations and duties of officers serving in the Medical Department U S Army, from June 8 1895, to June 14, 1895

Capt Charles Richard, Asst Surgeon is granted leave of absence for three months, to take effect when he shall be relieved from his present duties on or about June 30, 1895

Capt James E Pilcher, Asst Surgeon, will be relieved from duty at Ft Niagara, N Y, upon the expiration of his present sick leave, and will report in person to the commanding officer, Columbus Bks, Ohio, for duty at that station

Capt Louis Brechemin, Asst Surgeon, will be relieved from duty at Columbus Bks, Ohio upon the return from leave of absence of Major William E Waters, Surgeon, and will proceed to, and take station at Baltimore Md, as attending surgeon

Capt Charles Richard, Asst Surgeon is relieved from duty at the U S Military Prison, Ft Leavenworth, Kan, to take effect June 30 1895, and will proceed to comply with the order for him to take station at St Louis Mo

Col Francis L Town, Asst Surgeon General is granted leave of absence for two months, to take effect about July 1, 1895

Major Louis M Maus, Surgeon, is granted leave of absence for one month and twenty days, to take effect on or about Aug 10 1895

Capt Edwin F Gardner Asst Surgeon is relieved from duty as attending surgeon and examiner of recruits in Boston, Mass, and will report in person to Col Charles H Alden, Asst Surgeon General president of the examining board appointed to meet in Washington, D C for examination by the board as to his fitness for promotion, and upon conclusion of his examination, will report for duty at Ft, *Grant, Ariz*

Capt Joseph T Clarke Asst Surgeon is relieved from duty at Ft Omaha Neb, and ordered to Ft Washakie, Wyo for duty, relieving Capt Henry I Raymond, Asst Surgeon Capt Raymond, on being thus relieved, is ordered to Ft Niagara, N Y, for duty at that post

Capt Philip G Wales, Asst Surgeon, now on temporary duty at Ft Niagara, N Y, will, upon the arrival of Capt Raymond at that post return to his proper station

Capt William J Wakeman Asst Surgeon will be relieved from duty at Ft Thomas, Ky, upon the arrival there of Capt Robert J Gibson, Asst Surgeon and will upon the expiration of the leave of absence granted him, report for duty at Ft Huachuca, Ariz

Capt Harry O Perley, Asst Surgeon, will report in person to Col Charles H Alden, Asst Surgeon General, president of the examining board appointed to meet in Washington, D C, at such time as he may be required by the board for examination as to his fitness for promotion, and upon the conclusion of his examination, to return to his proper station

Captain Harry O Perley, Asst Surgeon, upon the completion of his examination for promotion, will proceed to Hot Springs, Ark and take charge as commanding officer, of the Army and Navy General Hospital, relieving Lieut Col Alfred A Woodhull, Deputy Surgeon General Lieut Col Woodhull on being thus relieved will report in person to the Commanding General, Dept of the Colorado, for duty as Medical Director of that Department relieving Lieut Col David L Huntington, Deputy Surgeon General Lieut Col Huntington on being thus relieved, will report in person to the Surgeon General for duty in charge of the Museum and Library Division of the Surgeon General's Office, relieving Lieut Col John S Billings, Deputy Surgeon General

PROMOTIONS

To be Asst Surgeons with the rank of Captain after five years' service, June 6 1895 First Lieut Frank R Keefer, Asst Surgeon First Lieut Thomas U Raymond Asst Surgeon First Lieut Henry D Snyder, Asst Surgeon First Lieut Allen M Smith Asst Surgeon First Lieut Ashton B Heyl, Asst. Surgeon, First Lieut Joseph T Clarke, Asst Surgeon

LETTERS RECEIVED

Abbott & O'Brien, St Paul Minn, Alta Pharmacal Co St Louis, Mo, Atkinson, W B, Philadelphia, Pa

Bagley, E C Sparta, Wis Ballantyne, Wm & Sons, Washington, D C Bell Clark New York, N Y Bleyer W E Cincinnati, Ohio Brown, Bedford, Alexandria, Va, Burroughs, Wellcome & Co, London, Eng

Culbertson J C, Cincinnati, Ohio Cannaday, Chas G Roanoke, va Columbia Chemical Co (2) Washington, D C, Cleary, W P New York, N Y

Doyle, G, Syracuse, N Y Diller, Theodore, Pittsburg Pa de Schweinitz E A, Washington D C Durgin, S H, Boston, Mass Danbury Medical Printing Co, Danbury, Conn

Eskridge J T Denver Colo

Faville H B Chicago, Ill, Fuller's, C H, Adv Agency, Chicago, Ill, Fawcett C C Stewartsville Minn

Gillette, Wm J Toledo, Ohio Goff, J W, Harleysville, Pa

Hummel C C Mechanicsburg Pa Hartley Henry, Philadelphia Pa, Haine, W J West Farmington Ohio Hummel, A L, (4) Philadelphia, Pa

Kinyoun, J J Washington, D C

Larrick, G W Middletown, Va Lincoln D F, Brooklyn, N Y

Manuf'rs Adv'g Bureau, New York, N Y Mouser, S M, San Francisco Cal

Neiers, O C New Palestine, Ind

Purvis C J (2) Utica N Y

Regensburger A E, San Francisco Cal Raub, J F, Washington, D C Reeves, James E, Chattanooga, Tenn, Reed & Carnrick (2) New York, N Y

Small E H Pittsburg, Pa Stoner G W, Baltimore, Md Sayre, R H, New York N Y, Strong, T D Westfield, N Y Scribner's, Chas Sons New York, N Y Schafer, Geo H, & Co, Chicago, Ill, Stearns, F, & Co Detroit, Mich

Thayer C P, Boston Mass Tyson, James, Philadelphia, Pa Thompson C New York N Y

Wellington G G Chicago Ill, Woodbridge, J E, Youngstown Ohio Wishard, W N, Indianapolis, Ind Wall, H J, Milwaukee, Wis Warner, W R & Co, Philadelphia Pa

before the blood reaches the ventricles, bleeding into the lateral ventricle may proceed from rupture of a vessel of the choroid plexus or the velum interpositum, but only in rare instances as the usual source is some artery in the brain substance, the blood simply breaking into the ventricles after a considerable clot has formed, so it is rarely necessary to open them, if operation be done early

According to Edes, the most common form of intracranial hemorrhage has its seat in the white substance of the brain which is consequently more or less lacerated, such a clot may vary in size from a mere point to many ounces, filling a cavity nearly as large as the hemisphere The vessel which most frequently bleeds is that which is given off from the middle cerebral and runs along the outer side of the nucleus lenticularis where it is covered by the external capsule, hence the large number of clots found in the white substance of the internal capsule Therefore when the hemorrhage is not found as a meningeal or subcortical lesion as anticipated, this is the point to be sought if the symptoms indicate the middle fossa, if the clot be located outside the internal capsule it may be removed with comparative safety through a large opening in the skull—three or four inches by one and a half or two

Hemorrhages in the thalamus opticus usually originate in the posterior communicating artery or the posterior cerebral and are too deep to be reached

DIAGNOSIS

No attempt at surgical diagnosis should be made while the patient is in deep coma After the severer apoplectiform symptoms have disappeared, embolism must be carefully excluded as trephining would be wholly inexcusable in the latter disease The points of differential diagnosis can be found in all good text-books on neurology, they are foreign to our theme and are therefore not considered It is well also, in determining the character of the disease to exclude hemiplegic forms of intracranial syphilis, and tumors which may be suddenly manifested, though since gummata, if accessible, should be removed as should curable forms of tumor, the differential diagnosis is not so important The following rules will be found useful in deciding whether or not operation is justifiable when the diagnosis of cerebral hemorrhage is clearly established

1 When there has been a blow upon the head, and hemiplegia, aphasia or hemianopsia follows, there is nearly always a hemorrhage which may be cured by opening the cranium at the point indicated by cerebral localization

2 A slight premonitory attack, affecting speech temporarily or producing a heaviness of the hand or foot (or both) for a few minutes, if followed by hemiplegia may be taken as a good point in favor of operation, as the bleeding vessel is probably on the surface or very superficial

3 When the case presents a history of moderate loss of power or even complete hemiplegia without loss of consciousness, followed in a few hours by the sudden appearance of coma, a marked fall of temperature succeeded by some fever—a hemorrhage has broken into the ventricles or just beneath the meninges, is still progressing and indicates immediate trephining, a day or two afterward will be too late—so if done at all it should be performed within a few hours, if possible

4 Bilateral hemianopsia (blindness of corresponding sides of both eyes) appearing suddenly is apt to be due to a hemorrhage in the occipital lobe of the *opposite side, sufficiently large to be easily found*, and justifies exploratory operation

5 Vomiting, severe occipital headache and vertigo, with or without distinct paralysis, with ocular symptoms of nystagmus or strabismus, appearing suddenly, render a diagnosis of cerebellar hemorrhage probable and indicate exploratory trephining.

6 Paralysis of the third, fourth or sixth pairs of nerves indicates a lesion of the pons and contraindicates operation

7 Paralyses of very limited extent, especially if complete, are not often due to hemorrhage, being local palsies rather than the peripheral symptoms indicative of cerebral disease

8 A very severe headache, followed by gradual but persistently deepening coma, with hemiplegia becoming more and more nearly complete, means a hemorrhage into the great basal ganglia—beyond surgical help

9 Very sudden and complete hemiplegia and coma (coming on as if the patient were struck with a hammer) contra indicate operation, particularly if the patient be under 50 years of age, the disease is probably embolism, heart lesions, endoarteritis, a septic process and syphilis strengthen the probability.

10 Profound coma and relaxation without hemiplegia usually depends upon injury of the pons and decide against operation

11 According to Hughlings Jackson, convulsions, early rigidity and conjugate deviation of the eyes of a spastic form are conclusive evidences of superficial hemorrhage But convulsions always accompany cerebral hemorrhage in young persons, regardless of location

12 As an assistance in locating the clot, Durand-Fardel's figures may be quoted Of 177 cases the hemorrhages were in the ventricles sixty-six times, in the meninges thirty-one, in the corpus striatum and thalamus opticus twenty two, in the white substance of the middle lobe eighteen, in the corpus striatum alone thirteen, in the corpus striatum and hemisphere twelve, in the anterior lobes eleven, in the posterior lobes eleven From which we see that a considerable proportion may be regarded as within the reach of the surgeon

OPERATION

The surgical treatment of cerebral hemorrhage consists of 1, ligature of the ruptured vessel, 2, pressure stoppage of the bleeding if tying is impossible, or 3, arrest of the carotid stream by ligature—all for checking further bleeding, and removal of a mischief-producing clot after cessation of the hemorrhage, for many distressing symptoms may frequently be relieved by the operation

Of the first the probable location of the lesion having been decided, the head is shaved and cleaned by thorough scrubbing and washing with sulphuric ether or alcohol, and sublimate solution 1 to 1000, and a large flap of skin and pericranium laid back. A trephine is applied and the "button" removed, when the opening is enlarged to the size of two by three inches over the area involved The dura is then incised and turned back and search made for superficial bleeding, if found, the clots are cleaned out and the vessel tied if still active, a small thread of catgut being passed around it by a curved needle and gently tied—it not being best to use much force lest

We appeal to the people to rally to our aid The love of humanity should call forth the generosity of our fortunate few The memory of Newberry, Crerar, Jones and Lewis shall live when their tombstones are no more The high examples of Rockefeller and Field should not be lost on those who wish to witness the blessings of their benefactions while they live Who will be our Scoville of great heart, and our Dr Pearsons of many noble deeds? Or who will be our Mrs Pearsons with her $10,000 gift to Anatolia College, presided over by my classmate?

Great souls are these—products of this century and this civilization—superior to any other! Their memory shall bloom when monuments crumble to dust Their spirits shall animate the coming generations when their fellow-mortals sleep forgotten What other benefactor of our race shall rise to bless his fellow-men? Who will sow the seeds of a lasting charity by endowing this refuge—this restorer of the helpless to health and happiness? And what more fitting place to appeal for brotherly love and sympathetic deeds than this platform, hallowed by that poetic preacher who dwelt like sunshine in our midst, consecrated to the cause of humanity and a broad Christianity, whose features, cast in classic mold, smile sweet benedictions on our cause—that moral philosopher and Christian philanthropist, David Swing!

ORIGINAL ARTICLES

HISTORY OF THE CASE OF THE HON WALTER Q GRESHAM, LATE SECRETARY OF STATE OF THE UNITED STATES

BY W W JOHNSTON, M D

WASHINGTON D C

Secretary Gresham was taken ill on April 30, the earliest symptoms appearing while he was at a Cabinet meeting, on the following day he was suffering from acute epigastric pain, which was so severe as to require the use of morphia hypodermatically On May 3 the pain changed its location to the right infra-axillary region By reference to the thermometric chart it will be seen that during these days he had fever At this time he was under the care of another physician

Early on the morning of May 4, I received a note asking me to call and see Secretary Gresham at the Arlington I was requested by him to take charge of his case The chief symptoms which were presented to me, at my first visit, were fever, embarrassed breathing, his voice being broken during conversation, and his facial expression indicating suffering, the pulse was 100 and not very strong and his respirations were 36 to the minute He had slept several hours during the night, but sleep had been much disturbed by the dyspnea and by acute pain in the right side

Physical examination of the chest showed the presence of a considerable amount of fluid in the right pleural cavity, dullness on percussion and aegophony reaching as high as the lower edge of the scapula There was diminished expansion and entire absence of vocal fremitus over the same region

The diagnosis was made of acute pleurisy with effusion on the right side, this opinion was based upon the symptoms and physical signs described, there was no symptom, noted by me at the time, which could not be explained by this lesion, and there was no symptom which indicated any lesion of any of the abdominal viscera Neither then nor at any subsequent period was there any icterus or abdominal tenderness, or unusual tympanitic distension

A cantharidal plaster, six inches square, was applied over the right infra-scapular region, a liquid diet of koumiss and milk ordered and absolute rest enjoined A mixture was prescribed containing the liquor ammoniæ acetatis and tincture of digitalis He was already under the care of a trained nurse, another one was secured to assist, and everything was done for his general comfort under the watchful supervision of Mrs Gresham

During the day the patient slept at intervals, and there was a good deal of discomfort in breathing, he was unable to lie on either side, but his symptoms did not change for the worse The blister had vesicated well, this was dressed and the right side covered with cotton and oiled silk

May 5 After 1 A M the night was comfortable, his temperature continued to drop until it reached 99 2 degrees at 6 A M At 9 A M an attempt to turn over, brought on a violent paroxysm of pain in the right side of the chest, for a time he breathed with difficulty, but as soon as the pain passed off, he was in no sense any worse than before A water enema was followed by a large normal movement At the morning visit the line of dullness on percussion showed the fluid was greater in amount, the respiration had increased to 40 and the pulse to 118 per minute, these being the maxima reached during this period of the illness, during the latter part of the day he was more comfortable, and slept three hours at intervals Milk, koumiss and chicken broth were taken alternately and the ammonia and digitalis mixture was given, but not regularly

May 6 During the night the patient slept in short naps, at 7 A M there was profuse perspiration, the temperature then being 98 2 degrees and he was nervous and restless Later in the morning he felt better than before, a water enema gave him a small normal action and in the afternoon he slept three hours The pleural effusion reached its maximum to-day, the dullness extending nearly to the spine of the scapula, but the breathing was not over 30 to the minute, the pulse 98, the greater ease in breathing seemed to be due to the relief from the constant and aggravated paroxysmal pains in the pleura which had been present up to this day, and which after this did not recur

May 7 The patient slept moderately well during the night, in the early morning he was restless

Mr Gresham frequently, and generally in the morning, complained that he was suffering from indigestion, but there never was any objective evidence of this, his tongue was slightly coated and dry, and there were occasional eructations of gas, but as a rule digestion of the fluid food given was as well performed as it usually is in acute illness During the day he had several short naps and seemed very comfortable, although he was at times anxious and nervous

May 8 The patient slept between six and seven hours during the night, at times lying on his left side and breathing with no difficulty He awoke

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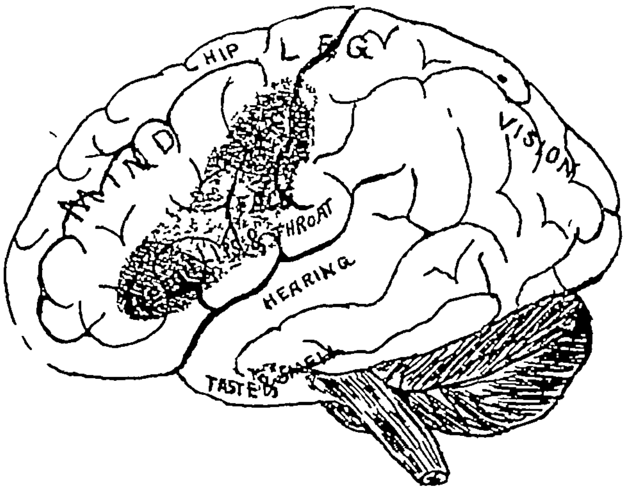
Transfusion mentioned on page 909 was made by Dr Van Rensselaer the scalp it was discovered that normal brain pulsation had returned at the opening in the skull He slept nicely all night—quite a contrast to the moaning and tossing of two or three previous nights of insomnia for which sulfonal and morphin (gr ¼) had given no relief At 9 A M next day he appeared much brighter and nodded and smiled when asked if he felt better, the headache was gone, considerable motion in foot was obtainable upon requesting him to move Improvement continued from that time on—the temperature being normal, and primary union being obtained He sat up on the fifth day and on the twentieth day after operation rode more than two hundred miles The subsequent history is one of restoration to health with ability to walk and care for himself, but the use of the hand has never been regained, nor has his speech



From the fact that this patient seemed almost *in articulo mortis*, I am satisfied that the operation saved his life and probably had much to do in preventing permanent paralysis of the leg Sometimes it is possible to give some relief even after a considerable time has elapsed, as is shown in a case almost precisely similar to the one just mentioned, the interesting features of which I will relate

Case 3—I M, of Oklahoma, age 54, came under my care in June, 1892, affected by complete hemiplegia and aphasia due to a cerebral hemorrhage which occurred more than three months before He complained of much headache upon the left side, insomnia, and general ill health, at times homicidal and suicidal tendencies had been noted following periods of sleeplessness and great irritability I sent him to the hospital and with the assistance of Drs T B Thrush and J C Maxson operated I removed three one-inch buttons over the leg, arm and speech centers, and joined these openings with bone forceps, placing the fragments in hot bichlorid solution, 1 to 4000 On opening the dura no evidence of hemorrhage was to be seen except a white infiltrate over the speech and lower part of the arm centers Believing there had been a rupture of the lenticulo striate artery I cut through the brain to the region of the internal capsule A large quanty of broken-down brain substance immediately oozed out, so I extended the incision upward and introduced my finger into the cavity, removing two fragments of the clot, each about an inch in length, together with a lot of *débris* I then irrigated the cavity with sterilized normal salt solution, established drainage with several strands of catgut, stitched the dura and replaced the pieces of skull in a kind of mosaic, carefully suturing the scalp and applying a gauze compress so as to hold them in place, with the usual dressings

Convalescence was speedy and uneventful For three days there was a little fever (100 degrees F) and no improvement was to be seen But at the end of that time the temperature became normal all the distressing head symptoms disappeared and then motion began to return slowly in the affected side In a few weeks the patient was walking around by the aid of a cane with but little difficulty Motor power has never returned in the hand, but the arm and forearm now have some motion Speech was not restored The bladder irritation and obstinate constipation—so prominent before the operation—entirely vanished, the mental symptoms never recurred and the patient regards himself as vastly improved

The only case upon which I have operated which comes under my third rule was this

Case 4—J P E, male, age 52, a patient of Dr Kistler, of Kansas City, I first saw at 4 P M, on March 31, 1893 I found a hemiplegia of the left side which came on thirty-two hours before, while he was straining at stool, for some hours previously he had complained of vertigo, and had mentioned a "bad feeling" in the head and a heaviness of the left hand and foot two days before, at which time he went to bed with some vomiting—ascribed to biliousness, and for which a cathartic was administered, from this came the straining which caused the bleeding He had a temperature of 100 degrees F His mind was not much affected until more than twenty-four hours after the attack, but for eight hours there had been wild delirium and at the time of examination he suddenly became comatose A severe convulsion would occasionally appear upon the paralyzed side, from which I expected to find a hemorrhage just beneath the membranes. I therefore ordered him to be carried to the German Hospital

At 9 P M, coma was complete, so without any anesthetic I opened the scalp and removed a piece of skull two inches by four inches over the motor area The dura was very tense and pulseless and upon cutting the dura the brain protruded prominently into the opening at which relief of pressure the patient began to show such signs of returning consciousness as to require a little chloroform There were no surface indications of hemorrhage, so I cut inward through the parietal convolutions until the greatly distended ventricle was reached Here there was a large quantity of semifluid blood, and broken-down brain tissue, which I removed as gently as possible and then irrigated with hot normal salt solution As oozing into the ventricle continued persistently a little iodoform gauze was gently packed in the wound and the ventricle and allowed to protrude through the dura Bulging of the brain was far less marked and after the dura was sutured around the gauze packing, cerebral pulsation was found to have returned The usual dressings were applied

At 10 A M, April 1 the patient died—the attending physician said from "shock" Owing to my departure from the city no autopsy was held, so the source of hemorrhage was never determined[1]

ORIGINAL ARTICLES

SEVEN CASES OF CEREBRAL SURGERY

BY C E RUTH, M D

PROFESSOR OF DESCRIPTIVE AND SURGICAL ANATOMY, KEOKUK MEDICAL COLLEGE, PROFESSOR OF CLINICAL SURGERY AT ST JOSEPH'S HOSPITAL, KEOKUK IOWA

Believing that cerebral lesions not accompanied by fracture or even trauma represent a large proportion of the cerebral cases requiring relief at the hands of the surgeon, I present the following cases in support of that view

Case 1—May 9, 1891, was called to see L G, age 5 years, who had four days previously sustained an injury by falling fifteen and one half feet, striking her head on a plank sidewalk No evidence of fracture of the skull was found at that time or subsequently She slept eighteen hours in twenty-four, temperature 99 5, pulse 72 Sensation and muscular coordination normal Appetite was good and bowels regular Slight mental hebetude Right side of head and face greatly swollen and discolored Extravasation of blood under the ocular and palpebral conjunctiva Left pupil responded to light readily Swelling prevented inspection of the right pupil A small swelling was found to the left and slightly behind the bregma

Diagnosis, intracranial clot Operation was made as soon as possible, the small swelling to the left of the bregma was cut down upon and a clot turned out much brighter than on any previous morning, his temperature was 98 degrees lower than at any previous time, his respirations were 26 and pulse 96 Three ounces of Hunyadi Janos water were given, as this had no effect, a water enema was administered later in the day and a small normal movement followed The afternoon was comfortable but without sleep The same diet was continued, but as he objected to the mixture and as he was doing so well this was discontinued

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[1] I believe this man would have been saved if the operation had been made a few hours earlier, before the blood broke into the ventricles That my patient died is no objection to the rule I have given as a number of cases of progressive hemorrhage have been treated surgically by other operators with brilliant results

There was no perceptible diminution of the fluid in the pleura, but no increase, and the general improvement and feeling of ease in breathing gave every encouragement of rapid absorption The question of paracentesis was not considered as no symptom called for operative interference

May 9 The night was less comfortable than usual, he did not sleep well until between 2 and 7 in the morning As he complained of indigestion, a powder of bismuth and bicarbonate of soda was given and later a water enema caused a small action During the afternoon he slept at intervals, the nourishment of buttermilk or broth was taken regularly during the day

May 10 The patient slept moderately well, but was disturbed by having two loose actions in the early morning The morning and afternoon were passed comfortably, his food was relished more than at any previous times As he complained of occasional and slight pain at the edge of the ribs on the right side, a small blister was applied to the right inframammary region and left until it caused vesication To-day there was a perceptible beginning to the absorption of the effusion All the symptoms were favorable, and beyond an occasional complaint of indigestion he spoke of nothing being wrong

May 11 The daily decline in the temperature and the improvement in other symptoms had been uninterrupted up to this date At 7 A M the temperature was higher than at any previous day at the same hour since May 5, it continued to rise during the day, reaching 101 6 degrees at 6 P M,, from this hour it continued to drop until it reached 99 degrees at 7 A M on the next day There was no apparent reason for this accidental interruption to the daily decline of the fever curve

Dr D W Prentiss met me in consultation and agreed with me as to the diagnosis and as to the favorable progress of the case, the pulse, respiration and temperature indicating a decline in the inflammation, and giving promise of early absorption of the fluid A capsule of squills, digitalis and calomel was directed to be taken every four hours, and buttermilk, milk and Mellin's food or bouillon were given every two hours

May 12 The night was very comfortable, there were several hours of sleep in the morning, as he wanted more food, tea and toast were given and, later, oyster broth The temperature had fallen and he seemed to have recovered from the sudden rise of yesterday Beyond an occasional sharp touch of pain on deep respiration there was no complaint today, the bowels were freely moved, and he was composed and cheerful Although asking for the privilege of attending to business, he readily consented to give up everything that might delay his recovery

May 13 From this date until May 25, there was a steady progress toward recovery from day to day The fluid in the pleura rapidly diminished, the temperature was normal and the pulse and respiration reached 76 and 18 respectively The tongue became almost entirely clean, and there was a demand for solid food to satisfy the increase in appetite The diet consisted of milk, buttermilk, ragout, toast and breakfast hominy On May 16, a small bird was taken with relish, and from this day on he was allowed solid food once daily, and semi-solids and liquids at other hours Now and then he complained of indigestion, but his appetite and desire for food was not at any time lost, the condition of the tongue, the character of the fecal discharges and the usually quiet sleep at night gave every evidence that digestion was being well performed As his improvement was so marked Dr Prentiss discontinued his consultation visits on May 18 No medicine was given during this time except a capsule containing quinia and nux vomica three times daily Two or three times the elixir of chloralamid was tried when he complained of sleeplessness at night

May 24 The night was passed most comfortably, he enjoyed his breakfast of a tender piece of steak with toast, and his dinner of a bird and toast, milk and bread and buttermilk being given at other hours. The nurse's record states that "the day was most comfortable," and he slept during the afternoon A solution of dilute hydrochloric acid with pepsin was given after food

No privileges were allowed the patient beyond the permission to look at an illustrated periodical for a few moments at a time, occasionally he sat in a semi-erect position supported with pillows, the same precautions were continued in every other respect as during the earlier part of his illness Except for one visit from his private secretary he saw no one except members of his immediate family, and he did not attempt to attend to any matters of business His manner was that of quiet content and satisfaction with his improvement

May 25 The patient slept well, the record says he had a very good night The examination of the chest showed the presence of a very small amount of fluid in the lower part of the pleural cavity, aegophony had almost entirely disappeared, the line of dullness was much lowered and there was a distinct return of expansion and normal vocal fremitus

The gain had been so marked in the past few days that the expectation was held out to Mr Gresham that he might be able to sit up by the side of his bed for a few minutes within three or four days On the evening of this day, however, a sudden change in his condition destroyed all these well-founded hopes, and the overwhelming illness began which ended fatally on May 28 The first indication of this change appeared at 7 30 P M, he seemed uncomfortable and restless, and complained of epigastric uneasiness which very soon became a decided pain About 11 P M he vomited a little greenish fluid and a few coagula of milk which he had taken about three hours before, there was no other undigested food in the matters vomited The temperature began to rise at the same time and the pulse and respirations increased in frequency

May 26 At 1 A M the pain was of so intense a character that it was found necessary to give hi one eighth of a grain of morphia hypodermaticall Mustard was applied to the epigastrium and liqu food was given in small quantities only The nigh was restless, sleep being interrupted, but toward occur should be operated upon No age is exempt from traumatic intracranial lesions without fracture, as is shown by my three cases in children and one in a man of 71, as well as a case reported to me by Dr Gaston of a man 50 years of age who received a blow on the occiput which produced rupture of the middle meningeal artery under the anterior part of the parietal bone which was fatal from secondary inflammatory trouble about the clot No fracture The site of the application of the trauma or the course of the branches of the middle meningeal artery will indicate the points to be explored in the absence of localization symptoms We can see the necessity for a guarded prognosis and can not pronounce our patients positively well till the lapse of many weeks or months, and should keep them under observation so as to detect the first evidence of danger

Case 5 —E B , age 36 Epileptic since 14 years of age Memory and general intelligence greatly impaired Nystagmus pronounced General health good Paretic on left side from infancy, with very little use of the left hand and drags the left foot Convulsions started in the left side to which they were confined until they became general ten years ago No history of injury or marked assymetry of the skull Jan 14, 1894, I removed three inches of bone over the fissure of Rolando, and identified the arm and leg centers with brain electrode Convolutions were defective in development, pale, and widely separated by broad and shallow sulci Recovery was prompt and apparently complete in two weeks and the relatives thought they noted marked mental improvement but that is to be taken with considerable allowance He contracted double pneumonia from which he died at the end of one month from the operation This case was operated upon in the hope that it might lessen the frequency and mitigate the severity of his epileptic attacks and thus, if possible, save what intellect he had

Case 6 —W W , age 38 Steamboat raftsman Well and exceptionally strong till Oct 18, 1893, at which time he became suddenly and completely paralyzed in the left arm and leg He was infected with syphilis eighteen months previously April 14, 1894, six months after the onset of the paralysis, I diagnosed the cause of the paralysis to be embolic obstruction of the ascending parietal and frontal arteries to the motor area of the right side, and removed three and one-half square inches of bone along the fissure of Rolando Brain was anemic, pulseless, did not bulge into the opening, and no muscular response could be obtained by the electrodes beyond a general tremor No abnormal resistance could be detected Recovery was complete from the operation in three weeks and at the end of six weeks he was able to walk by the aid of a chair, but the gain that was at first promised in the arm was not maintained His skull was scant one-half inch thick and composed almost entirely of dense compact tissue He left the city at the end of seven weeks but returned in October, 1894 Nov 17, 1894, I did a secondary operation on him before the Eastern Iowa District Medical Society, in which I nearly doubled the space from which the bone was removed, being mainly extensions backward from the upper, and forward from the lower end of the Rolandic fissure Improvement following the secondary operation has not been as marked as that following the first one, and is probably due largely to the lapse of time since the primary lesion and teaches us another lesson in promptness He can now walk by the aid of a cane

This case would seem to indicate that reduction of the cerebral tension to below normal by removal of bone and establishment of drainage, may bring about considerable restoration of function in portions of brain supposed to be damaged beyond the possibility of repair, from embolic obstruction of a terminal artery At the secondary operation in this case, I learned that the edges of the old opening were beautifully beveled, equally from the outer and inner tables, and that the pericranium and dura were blended to the opposite side, so that the actual gain in cerebral space is represented by one half the thickness of the bone, less the normal convexity of the part, for the membrane will pass directly across from the bony attachment at one side to that of the other, if it is not carried outward by intracranial pressure From this, it will be seen that the gain in cerebral space, by removal of the skull, will be relatively greater with a small opening In this case it was nearly one fourth inch, for the thickness of the skull was scant one-half inch This relief of tension may also enable neighboring parts of the brain to take up part of the work of a destroyed or crippled center, as is the case where a center is excised

Case 7 —Nellie P , age 5 years Was well until after a fall at the age of 1 year, at which time she could walk and talk some Following this fall she had nine convulsions in three weeks Three weeks later she had spasmodic contractions of the entire left side for twelve hours, followed by complete paralysis of the left arm and leg Twenty days later she had an intense fever accompanied by general convulsions for eight hours, closing with movements only of the left side She has never spoken since the attack and could not walk again until one year ago Drags the left leg and does not use the left arm Now has frequent general epileptic seizures and is idiotic May 23 did right sided craniectomy and removed three inches of bone over the fissure of Rolando Found defective development of the cerebral convolutions There was no assymetry of the skull and no evidence of fracture Though I am convinced that this patient sustained a cerebral injury from the early fall, which prompt and intelligent surgery might have readily recognized and removed, the time for such procedures had gone by She took the anesthetic badly and died in eight hours

Early signs of collapse in this case prevented application of electrical tests for the motor centers, and the ultimate result has not lessened my skepticism regarding the justifiability of craniectomy operations in cases of idiocy, even if due to traumatism when there is no assymetry of the skull, and the history of injury dates back to early life and has been of several years' standing In the adult we can hardly expect marked improvement in motor disturbances after the lapse of one year with or without operation In Case 6, paralysis of the arm occurred twelve hours before that of the leg, and would indicate that the ascending frontal and parietal arteries arise by a common trunk from the middle cerebral, the ascending frontal was first plugged and the embolism, probably specific in origin, developed backward so as to involve the ascending parietal in twelve hours and thus produce complete paralysis of the motor area of the opposite side contained lumps of mucus This mild diarrhea and vomiting were said to have been present for several weeks Hiccough had latterly been very troublesome There was no splenic enlargement Liver dullness began in the mammary line at the first rib, but did not extend beyond the costal arch The body was somewhat distended with gas In the epigastric region, extending into the left hypochondrium and reaching to within an inch and a half of the navel, was an induration, not modifying the outline of the abdominal wall, irregular in contour, not fluctuating, not movable, and but slightly tender to pressure, its diameter in the median line was about three inches and four and a half inches laterally, reaching to left mammary line The percussion note over this tumor was relatively dull, not tympanitic The lower abdomen showed no abnormality The urine was abundant, darkened by bile pigment and faintly albuminous and with Fehling's solution gave a slight but positive sugar reaction It was acid and of sp gr 1020 Though almost no pain was elicited by palpation, the patient complained of severe lancinating paroxysmal pain radiating from the epigastric region, with its point of greatest intensity under the xyphoid cartilage She also suffered similar pain in the back, between the shoulders The abdominal muscles remained almost motionless during respiration, which was almost purely costal and rapid, significantly so when considered with reference to the pulse rate and in the absence of signs of pulmonary disorder Fever was said to have been present for many weeks, though recorded observations were not made until November 27 During the entire period of illness there had been no chill Several weeks previously there had been a sensation of chilliness, but this had never recurred Neither had there been sweating, except to a small extent about the head She had at no time had symptoms of intestinal obstruction, on the contrary, there had been a notable tendency toward diarrhea almost constantly from the first She was unable to lie upon either side and was most comfortable in a semi-recumbent, dorsal position Exhaustion was great and sleep very insufficient and disturbed An hour after my examination she vomited some fresh blood

A consideration of all the symptoms and history eemed to justify the following diagnosis hepatic lic at the outset of symptoms on September 30, paction of the calculus at the common orifices f biliary and pancreatic ducts in the duodenum with incomplete obstruction Inflammatory hyperemia with gradual formation of suppurative pancreatitis and peri-pancreatitis The case progressed with varying but increasingly graver symptoms The tumor gradually extended downward to the level of the navel Diarrhea became very unmanageable, the stool assuming a thin grayish or greenish-gray, or yellowish, occasionally dark character Free fat was never detected in them, though sought for diligently Vomiting was also extremely distressing and constant, though often performed without nausea Microscopic examination of vomited matters gave no information as relating to the nature of the essential trouble They were largely made up of greenish mucus, often containing blood, or were often composed almost entirely of ingesta Treatment, both of diarrhea and vomiting produced only temporary effect There was complete anorexia In spite of supporting and anodyne treatment the physical condition steadily deteriorated, and on December 12 Professor Tiffany was called in consultation with a view to operative interference While agreeing in the main with the diagnosis as given, Professor Tiffany in view of the general condition did not feel justified in operating Diarrhea, vomiting and paroxysmal pain now became very distressing and the patient was kept constantly mildly under the influence of morphin, hypodermically administered The tumor remained hard, irregular, and gave no sign of fluctuation Tympanitis had noticeably increased on the 14th, and upon that date a noticeable fall of evening temperature was observed, but there was no increase of abdominal tenderness, though paroxysms of pain were frequent and severe whenever the effects of the morphin became weakened On the 16th, cough developed and crepitation was heard at the base of the right lung On the 18th at 8 45 o'clock she became very weak, the face, feet and hands cold, the respiration slow She rallied slightly after a while and during the day had four dark green stools On the 19th, at 9 45 o'clock A M she passed a copious stool consisting entirely of bloody pus During the day she had several similar stools At the same time the tumor became indistinct and noticeably smaller. She sank rapidly and died in collapse at 5 P M The course of the pulse, temperature and respiration and the extent of diarrhea are shown in the accompanying chart, which, however, dates only from the fifty-eighth day of the disease

Post-mortem examination, by Dr K B Batchelor, twenty hours after death (Examination of abdomen only) Abdomen distended and tympanitic. On opening abdominal cavity a large quantity of foul-smelling gas escaped with something of an explosion Gas continued to escape for some seconds. Greater omentum contained a quantity of fat There are multiple fresh adhesions between omentum and parietal peritoneum in superior portion of abdominal cavity, and there is also, here, very slight congestion in peritoneum No fluid in peritoneal cavity. The adhesions (fine fibrous bands) are easily broken down and separated *in right superior portion of* omentum and peritoneal cavity Toward the left side they gradually increase in number and size, but are easily separated everywhere

Areas of fat necrosis are found in great numbers in left upper side of omentum, over the abscess cavity None are found on right side The inferior portion of omentum is free from adhesions or fat necrosis The posterior surface of the omentum and the transverse meso-colon are much congested and covered with recent fibrous adhesions The intestines in superior portion of abdominal cavity are tied together by numerous fresh adhesions They are easily separated

Stomach shows nothing abnormal The head of the pancreas is almost entirely obliterated, the part remaining forming a portion of the posterior wall of the pus cavity This cavity occupies the position usually occupied by the pancreas, together with the whole of the lesser omental cavity Its walls are shreddy and have a spongy, worm-eaten appearance The cavity extends upward behind the stomach to the vault of the diaphragm, the inferior surface of the diaphragm being covered, to a less extent, with the shreddy and spongy lining of the pus cavity Situated about the center of the lower portion of this cavity is a small remaining part of the pancreas It years before with speech so imperfect as to be understood with the greatest difficulty, and for whom at that time I inserted an artificial palate Accompanying the letter was a program of the graduating exercises of the High School of Manistee, Michigan, in which he was down for the "Salutatory," having been given the highest honor of his class not only, but a position which could not be properly filled by a person with indistinct or imperfect utterance of the English language The following is a part of his letter - "I have sent you under separate cover an announcement of the graduating exercises of the class of '94, of which I am a member, thinking you would like to see the part you have played in the exercises For I owe it to you that I am to take part" He has since written me from the University of Michigan, where he is taking the classical course with high anticipations of the future because, as he says, his friends now tell him that he speaks with perfect articulation

This is only one of many similar instances in my practice and the practice of other specialists, showing the perfect success of artificial palates that have been inserted after the age of 15

For the purpose of bringing before you unquestionable evidence of the value of the artificial method of treatment in congenital cleft palate, I have selected from my *clientele* two patients who are with us this evening, whose experience as regards time in wearing an artificial palate is widely different The one gentleman, now 30 years of age, began about 15 years ago, while the other, a young man 19 years of age, will be remembered as coming before this society a year and a half ago, two weeks after the insertion of his first artificial palate At that time he was presented by me merely to show the improvement principally in the quality of his tone, and in certain enunciations that were previously impossible When you hear these gentlemen speak, as they have kindly consented to, after the reading of my paper, you will be convinced, I think, that were you to meet either one in private conversation—where the opportunity of using a lower tone than is possible in this hall would be greatly to their advantage—that nothing in the character of their speech would suggest the deformity under which they labor

The treatment for congenital cleft palate of whatever character, is usually the crowning event of a patient's whole life, for upon its success in enabling him to speak distinctly depends his future It is often the one event for which they have been saving and looking forward to for years, and what is of a far more serious nature in throwing the responsibility of a being's future upon the operator who attempts the correction, it is usually the only operation they will undergo, whatever its final result By this I do not mean they will not allow the operator to perfect or improve his first operation, but that after they have first investigated the subject of treatment, choosing the method which seems to promise the greatest benefit, and the operator upon whose skill so much depends, they usually will forever abide by the consequences In some instances their means will not permit a second outlay of money, to say nothing of other things, for a second or different operation, the success of which they have much reason to doubt In other instances, if the operation is a surgical one, which is successful only as to the perfect union of the fissure without material improvement in speech, or with an improvement which is not equal to that which certainly could have been obtained by a skillfully adjusted artificial palate, the latter operation is rendered impossible, unless the cleft is disunited for the proper insertion of the artificial velum, an undertaking that will rarely be submitted to, even if it were possible for results equal to those which might have been obtained in this way at first

Of the hundreds that are yearly added in private and hospital practice to the list of patients having a partial or complete disunion of a once surgically united cleft palate, few ever apply for a second operation of any kind for various reasons It is doubtful if many of these patients could acquire the ability to successfully use an artificial palate with the muscles of the natural velum and uvula stiffened and contracted by the cicatricial tissue of the operation when so much depends upon the mobility and sensitive activity of the natural muscles in acquiring the power to properly use an artificial velum as an adjunct of speech, just the same as the muscles of the hand acquire the ability to use an instrument of any kind in the accomplishment of an object which could not be attained without that particular instrument skillfully fashioned for the purpose and made to do the bidding of muscle and brain in the production of beautiful music or the restoration of a decayed tooth If the muscles have lost the possibilities of their natural cunning, either by disease or by a surgical operation, the most perfect brain and instrument are powerless to accomplish more than indifferent success

When patients have come to me from time to time with a surgically united cleft, realizing the inadequacy of their operation and with the hope of improvement by artificial means, it has been my custom to tell them that nothing could be done without first opening the suture, at least through the soft palate, and then with no promise of success beyond the probability of an improvement in their speech

I have one patient who is at present the Auditor of the Toledo & Ann Arbor R'y, who underwent surgical treatment for congenital cleft palate when quite a boy at the hands of those eminent surgeons, Drs Agnew and Garretson I found the soft palate perfectly united, but anterior to this in the hard palate there was an ovoid fissure about the width of a cent This was covered by a plate with a flexible extension made by Dr Patterson, of Kansas City When I first met this patient, about six years ago at Jackson, Mich, he was very skeptical as to the benefits of any mode of treatment He was accompanied by his sister who had brought her daughter, who was suffering from the same deformity, for consultation, or rather for investigation of my method of treatment When I heard his strongly expressed doubts as to my ability to render a service that would enable his niece to speak perfectly, I privately sent for one of my cleft palate patients, whom I introduced to them with no explanation After quite an animated conversation, in which my patient did most of the talking, I told them that the young man was wearing one of my palates At this they were greatly surprised and could hardly believe it until they had examined the palate and saw the cleft which was very large and apparently quite difficult to treat It is needless to say that this decided the operation for his niece which proved so successful that later—about three years ago—he insisted upon my making the attempt has, heretofore, been wellnigh impossible, it may be hoped reasonably, that the more definite knowledge of their clinical history and symptomatology that we now possess will insure its very much more frequent recognition The case that I have the honor to report presented characteristics that rendered an accurate diagnosis fairly easy to any one reasonably familiar with recent literature upon the subject More exact acquaintance with acute pancreatitis, however, will probably reveal frequent inter-relations of all three varieties mentioned My own case, for example, presented indisputable proofs of an antecedent hemorrhagic condition, as shown in the presence of blood cells and coloring matter in the contents and walls of the abscess cavity

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STRABISMUS AS A SYMPTOM, ITS CAUSES AND ITS PRACTICAL MANAGEMENT

Read before the Michigan State Medical Society, June 7, 1895

BY LEARTUS CONNOR, M D

DETROIT MICH

Landolt in his classical work says "A strabismus operation, when undertaken without an exact knowledge of the optical and muscular functions of the eye, is but a rude and dangerous experiment" The reason for this statement springs from the fact that strabismus is merely a symptom of numerous pathologic and congenital defects, and its rational management calls for the study and removal, or correction of these, so far as is practicable The story of strabismus well illustrates the persistency by which the profession traces a symptom to its origin, in order that its cause may be removed and the symptom cured Failure of squint operations has led to such study as revealed the reasons for the past defects and the methods for future success

At present we know that some cases of squint are readily curable, that some are incurable, and others doubtful, calling for additional study ere they can be classed either as curable or incurable Diefenbach operated first for convergent squint in 1839, by dividing the belly of the internal rectus muscle His operation was based upon the analogy of operations upon contracted muscles in other portions of the body He reasoned, that since division of contracted muscles or tendons elsewhere, restored muscular equilibrium, it should do so in the ocular muscles He neglected to note that the problem of contracted ocular muscles differed radically from that presented elsewhere, in that opposing recti and their associated elastic tissues constantly tended to separate their divided ends Hence the results obtained by himself and others were so frequently disappointing and actually disastrous that, except for the radical change introduced by Bohm, the operation must have passed into merited oblivion This transferred the site of the operation from the belly of the muscle to its tendinous insertion, thus leaving the capsule of Tenon mainly undisturbed The technique of the operation was so perfected by von Graefe as to render it easy and safe of performance, especially useful was his method for either increasing the effects of a tenotomy or diminishing the same

The ophthalmoscope enabled us to see that some cases of squint were due to diseases of the refractive portions of the eye, distorting the passage of the rays of light in their course to and from the retina, or, as in case of disease of the optic nerve, cutting off the power of transmitting the impression made by the rays of light upon the retina, to the brain

Not a few cases were traced to corneal opacities Eyes entirely blind were found to often squint Thus the symptom squint was traced to a variety of pathologic conditions, having one common feature, viz, they rendered the vision of the two eyes unequal and so deprived them of the "guiding sensation" With these facts in mind it is clear that a squint operation without previous careful ophthalmoscopic examination, must be "a rude and dangerous experiment"

Donders' studies of refraction and accommodation traced this symptom to other and more common sources Thus he showed that three-fourths of the cases of convergent squint were hyperopic, and an equal proportion of the cases of divergent squint were myopic He also pointed out the intimate relationship between convergence and accommodation, a physiologic fact which anatomic researches have supported, by demonstrating the close relation of their centers in the floor of the fourth ventricle When the eyes accommodate for near objects by the contraction of the ciliary muscle, they also converge by the contraction of the internal recti The bearing of this fact upon the causation of squint is apparent, when it is remembered that the hyperope is compelled to accommodate at all distances, and so the ciliary muscles are in a state of constant tension, and with them the internal recti The flattened eyeball of the hyperope has broken the harmony which should exist between convergence and accommodation Thus, if the hyperope accommodate for twelve inches, as in reading, the convergence will be at a point less than twelve inches if the muscles are of normal power The result is a diffusion of impressions upon the retinæ, to escape which the squinting hyperope turns one eye in and fixes the other at twelve inches, ignoring the impression of the squinting eye A repetition of such acts forms a squint habit, which, while at first alternating, at last usually becomes fixed The habitual suppression of the image in the squinting eye is followed by a loss of the power of perception—a loss which can be repaired if the retinæ be normal at the first Thus we have convergent squint due to eyes defective in the length of their antero-posterior axes To the query, Why all hyperopes do not squint, it is replied that in those who do not squint, the normal balance between the power of the internal and external recti is so changed that, instead of being 4 to 1 it is less, only 2 to 1 or even 1 to 1 Hence in the non squinting hyeropes, the excessive convergence required for distinct vision is balanced by the weak interni, so that the eyes remain straight If the externi be much in excess of the interni, we have a hyperope with divergent squint In support of this view of the causation of squint, advanced by Valk, I have habitually found all hyperopes to have weakened interni, as measured by the standard of 4 to 1

Donders found that myopes needed little or no accommodation, because the eyeballs were already too long, hence the convergence in near seeing would be *nil*, and so if the strength of the recti was normal, a the eyes would turn outward and give a divergen squint But if the externi were weak the eyes migh remain straight, or if very weak they might turn i and give a convergent squint Aside from muscula action in causing divergent squint in myopes, we their power of speech was fully in accord with his claims

"One young man gave a remarkable exhibition of his ability to whistle, which was a surprise to all who knew the impossibility of performing this function with a cleft of the palate, unaided by surgical or artificial means"

A H Peck, Secretary Chicago Dental Society

SLEEP THE RESULT OF DIFFERENTIATION

BY GUIDO BELL, M D

INDIANAPOLIS, IND

SYLLABUS

There are no atypical cells in the *organisms for this reason and* others there must be something guiding all biologic processes—species in action is identical with vitality

The fundamental functions are assimilation and proliferation differentiation is the tendency of bringing assimilation and proliferation in contact with the outer world under most favorable conditions

These influences are either food and air or disengaged (cosmic) energy Food is preëminently chemic change and is carried on a neutral road through the body cosmic influences are carried in an electrical form also on neutral roads Blood and nerves are neutral in consequence of their metaplastic nature as hair and nails are

All biologic phenomena are subject to the law of conservation of energy but controlled by species

Trypsinogen and inogen are transformed by a specific irritation into trypsin, or mechanical force respectively Similar to this, we have to assume a product in the cerebral cell which, on irritation, becomes an "imprint" consuming oxygen The nerve cell puts itself asleep

It is proper and correct that "experimental science ought to vigorously forbid itself all research relative to first causes" But excluding such a research as not pertaining to experimental science we have taken our aim too short in physiology

Within the last fifty years, since medical sciences have been conceived from the standpoint of induction and taught so in regular schools, it became evident that medical practice did not make equal progress as science did, and that American medical practitioners with less schooling can well compete with their European colleagues

The cause of this seems to rest in the fact that the young practitioner can not translate easily the language of science into that of practical life It is difficult for him to get the essentials of a phenomenon by abstraction and to compare them with his doctrine He learns using terms without a clear conception, he speaks of constitution, temperament, vitality and so on and refers to them in his judgment and action

It seems to be just and commendable to draw forth these terms from indistinctness, and to lay down the "known" and the "knowable" but not yet known

My endeavor is to plead in this article on sleep for the term, vitality I choose an object to be concise and clear, and I select sleep because she, a natural healer, offers the best opportunity of viewing nature's workshop

I define vitality as the metaphysical principle *active in the development of the individual and in* procreation Both changes and disorders, inherited and acquired in life, must be included in a given case Vitality is identical with species or type I will try to show that the law of conservation of energy can not be understood in biology if not placed under the control of species Only such forms of energy are disengaged in the cell, and so much of each as are in accord with its design

Sleep is a normal condition of the human body, it is periodical rest with a higher or less degree of unconsciousness due to inactivity of the nervous system Not only the avenues by which we receive impressions are closed, but also the mechanism through which our various relations with the outer world are maintained and regulated, is cut off

But not all organs sleep, some find other means to be equal to their duties This variation is explained by the laws of differentiation

All biologic functions must be studied in the simplest forms of life—the cells The cell consists of a cell wall, plasm and a nucleus But some living matter has been observed without a cell wall and even a nucleus can be missing Thus in the simplest living being there is nothing but protoplasm, a network holding together a gelatin or fluid, and consisting of carbon, oxygen, hydrogen and nitrogen

But life *is not mere chemic change*, it *is rather* chemic change in the services of the metaphysical principle of species which in juxtaposition develops the individual and in postposition creates the offspring (Juxtaposition and postposition are inadequate terms, because the individual is not made, but procreated and developed)

We must accept the metaphysical control for the following reasons

1 Every cell and every organ in the human body is strictly typical in normal and pathologic condition, if forms are made under control, the forces producing them must first be controlled Only such forms of energy are disengaged and so much of each as are in accord with the design

2 There is a correlation between all functions under a central power

3 Only certain substances are absorbed, matter absorbed either benefits or injures the cell, but to a certain degree of irritation the cell retains its integrity

4 Intellectual and moral qualities of man can not be brought under the law of conservation of energy without acknowledging a metaphysical principle in close contact with matter and energy *Cogito ergo sum* is the deduction of the general axiom, *species, ergo vivens* Species creates the individual *in abstracto* and makes it the subject towards objects

5 We perceive objects not as they are but as they affect our senses, but we get a correct perception over imperfect and faulty apparatus

6 Only an organism can be sick and may recover health by maintaining the typical form, although chemically changed

7 Transmission of changes and disorders from parents to offspring means only that species may suffer as well in postposition as in juxtaposition

8 In nerves and muscles of a dead body, there is no disengagement of electricity and of mechanical force, but an unrestrained chemic dissolution takes place

Both intellectual and animal life are manifestations of the same metaphysical principle Type or *species leads every disengagement of energy in* organic action But before we consider energy in its relation to matter and especially in its modifications in an organism we must call attention to a misunderstanding commonly met with, that forces act directly at a distance and that energy makes a round from masses to masses

If it is true that where there is one substance there no other can be and that matter and energy can not be separated, then we may not use expressions as "free or communicated energy," energy being inherent to matter can be active and disengaged only. Light is communicated neither to the eye nor to the

Atropin was used six months and the correcting glasses worn constantly, with the result that ten years later the eyes were straight and the vision binocular and normal

Case 4—Boy aged 8, convergent squint of the left eye, noticed when year and a half old as alternating but now fully fixed, ophthalmoscope revealed perfectly clear media, and a hyperopia in the right eye of two dioptrics, and in the left of two and a half, vision of right eye 20-30, of the left 20-100 Glasses correcting the hyperopia, both straightened the eyes and substantially improved the vision of the fixed eye This improvement continued till vision of the squinting eye was equal to that of the other, and nine years later the vision continued normal and the eyes perfectly straight

The last two cases were clearly non-operable True, a tenotomy would have rendered the eyes straight, but later they would have diverged

To avoid complexity, simple hyperopic cases are selected, but cases of hyperopic astigmatism, simple or complicated with hyperopia obey the same laws

It follows that in every case of uncomplicated squint, the question arises, Does it belong to the class of congenital amblyopias or no? If the answer be affirmative, the case can be operated upon at once for cosmetic effect—there being no hope of improving vision If the answer be negative, we must separate the operable from the other cases The following has been found a safe method of procedure

1 Eliminate all cases of paralysis

2 With the ophthalmoscope, detect all squints due to opacities in the refracting media and treat them by operations, as in congenital amblyopias, for cosmetic effect merely

3 Determine the vision of each eye, and the kind and degree of ametropia under mydriasis

4 Correct the full amount of ametropia, and if this renders the eyes nearly or quite straight, an operation is inadmissible, and the cases will probably go on to full recovery, under the use of glasses and atropia

5 If glasses and atropin produce no perceptible effect upon the squint, then a tenotomy of one or both recti is indicated, followed by the use of glasses to relieve the eye strain and retain the eyes in the position resulting from the operation The securing of binocular vision in this class of cases is materially aided by gymnastic training of the weaker muscles, and the cooperation of all

6 The time for operating upon convergent squint depends entirely upon the ability of the surgeon to separate the operable from the non-operable cases An operable case is best treated as early as the cooperation of the patient can be assured—usually at about 6 years

7 If glasses correcting the full ametropia be worn at an early date, the normal relations of convergence and accommodation are soon established, better developed during child growth, and the ultimate vision more perfect

8 To secure the best results, calls for much attention to the management of these cases, during a period extending over months or even years

9 As to the final balance of the internal to the external recti, a proportion of 4 to 1 has given the greatest comfort to patients, and the best vision under all circumstances

CONCLUSIONS

1 Strabismus is always a symptom of *some* morbid or congenital defect

2 Success in its relief, has increased in direct proportion to our knowledge of these conditions and defects

3 Strabismus due to opacities of the refracting media or to congenital amblyopia, can only be treated by operations, and solely for cosmetic effect

4 Strabismus due to the combined action of hyperopia and normal recti, is treated by tenotomy or advancement, atropin mydriasis, suitable glasses and gymnastic or innervation exercises

5 Binocular vision is to be sought for in all cases other than those due to opacities of the refracting media, congenital amblyopia or organic disease of the retina or optic nerve With sufficient perseverance, it is attainable in a fair proportion of cases

6 Recent studies of heterophorias afford substantial aid in the better management of squint, by the new standards of both operative and gymnastic work, by the more convenient and reliable instruments for examination, and finer ones for operation

7 There yet remain a number of cases of squint not explicable by our present knowledge, or amenable to treatment by accepted methods To bring these under definite law, both as to cause and management, remains for the student of ophthalmology

103 Cass Street

CONSERVATIVE BRAIN SURGERY

BY S V CLEVENGER, M D

CHICAGO

In "Lectures on Intracranial Surgery," published in this JOURNAL, June 8, 1895, by Dr Emory Lanphear, certain statements are made that are not warranted by pathologic and alienistic knowledge, certain operations are recorded as having been performed that are not justified by the literature or experience of those most competent to judge, and the results of the operations being unfavorable, and in some instances causing death, the conclusions of the paper alluded to are improper, and if recklessly absorbed and acted upon by others may be productive of further discreditable surgical interferences, and revolt of the laity against "butchery," as many unsuccessful operations are styled, even when these are judiciously and justifiably done

That Dr Lanphear is a "brilliant operator" is well known, but when this ability is unassociated with other requisites it is like pyrotechnics near a powder magazine He speaks of "insanity from softening of the brain" He can not find such an expression in any work on insanity worthy of the name At this date, to speak of "softening of the brain" as any kind of insanity, would place the physician who used the term upon the level of the public, untrained in any kind of medical information "Softening" is not an initial lesion, but merely a consequence, and where found associated with cerebral defects, mental, motor or sensory, it is subsequent to hemorrhage, compression, contusion, plugging of arteries or veins that originated such defects Extensive softening may exist without insanity, and often, when found in the brains of the insane, is not related to the insanity in the remotest degree

Trephining to relieve compression of a cortical, or even to reach a reasonably accessible subcortical neoplasm, either of meningeal or neurogliar origin, or to raise a depressed piece of bone, or remove an exostosis, or to evacuate an abscess that can be reach without running the risk of murder, no one shou find fault with, but when it is proposed to open t brain for an embolism situated usually near the cer bral base, most often in some Sylvian artery branc result of a more distinct individuality of the organism as a whole But dependence of tissue and organs, and the more marked individuality of the whole organism make a shifting from variety to a new species difficult and impossible Virchow says "Darwinism has no room in pathologic anatomy of man"

Assimilation and proliferation are really the prerogatives in living matters towards inanimate masses as crystals They are the fundamental functions of life in the simplest forms as well as in the most complicated organisms, they are active in all organs of different and various specific functions which may explain the correlation of these functions and also the dependence of each from the whole These various and different functions are specific and the result of differentiation as perception, motion, respiration, digestion, circulation and secretion

All these specific functions have in common the tendency to bring assimilation and proliferation in contact with the outer world, under most favorable conditions, and the means of accomplishing this are the organs

The external influences are either substance in form of food, drink or air (latent energy in a general sense) or disengaged energy in its origin either directly or indirectly cosmic Latent energy or food, drink or air entering the body begins a chemic change and means a plus to the household which interchanging gradually diminishes

There are connective, muscular, glandular and nerve tissues in the human body and each with various metaplastics, and besides this a procreative tissue in the sexual organs These five mother tissues maintain their character even in metaplastics, but nourishing will be different in mother tissue and metaplastics Another difference will arise from the specific functions The glandular cell produces, for instance, trypsinogen, glycogen and so on, the muscular fiber, inogen, both to be disengaged with or without transformation For muscular tissue it may be an explosion or a process similar to bulging, dividing and separating in proliferation But for nerves the primordial substance must be produced by their respective cells or mother tissue which on irritation appears instantaneously in an electric nature For this reason we assume molecules constituting nerve substance to be homogeneous and their electricity to be latent, as warmth is latent in fluids and gases Therefore their energy is excitable in an instant Certainly there is not an electric current in nerves Nerves have lost their individuality as hair, nails and blood have, but their neutrality enables them to be carriers of irritation

The next conclusion will be that neither nerves nor blood have scientifically the prominence in the household of man that is asserted in our text books The latter distributes food or latent energy, and the former cosmic irritation or active energy, both maintain a neutrality but of the greatest importance The fundamental functions of life rest in the mother tissues The weakness of both the humoral and neuropathology is manifest Blood and nerves are the routes our therapeutics take, but our attacks must be directed to assimilating and proliferating tissue

Of the forms of disengaged energy from without, some are received by our senses and are answered by a reaction of electrical polarization Soon the whole nerve is placed in a state of electric irritation, a "nerve-current" is formed and this irritation is carried to the central organ and from there on other roads back through the whole system especially to muscles, glands and so on

As we observe in simple organisms, as in hydra, an endoderm absorbing food and an exoderm receiving irritating energy, so we have two systems for the same purpose in higher differentiated organisms

But organs receiving disengaged energy become exhausted periodically, according to the law of conservation of energy, require rest and are restored by rest This is the standpoint we have to assume in judging exhaustion leading to sleep

Herbs and animals fit themselves to the surroundings and protect themselves in order of self-sustenance and development This tendency is also expressed by differentiation

Individuation begins with formation of organs, for protection of which in the development of man the greater part is cast off I mean the fetal membranes But the remaining part, the skin, serves as a coat of mail and an exit for excretions, and at the same time gives space to peripheral receivers of the organs of perception remotely located But no other, unless disengaged energy, and only one form and a certain form, finds an entrance at each receiving place, thus light is referred to the eyes, mechanical force to ears and fingers, chemic change to nose and tongue, meanwhile millions of sentinels are dispersed all over the surface, the filaments of cutaneous nerves For warmth we have no special sense and not for electricity What a contrast the human skin presents! Impermeable to all substances and influences as long as it is unhurt, the skin is the bearer of apparatus sensible to all grades of quality and intensity of energy from near and far

Energy of the sun excites electric vibrations of the ether, which, entering the atmosphere, are transformed into light and reach us either directly or reflecting from the surrounding world as color, sound, motion, warmth and so on These relations to the outer world are the cause of the variation of the body, of its gain intellectually, and of its loss bodily and certainly of our intellectual and moral life

But on the other side we observe that the functions of the kidneys are more important to health than those of our eyes, and the activity of the stomach and liver more necessary to life than the senses of smell and taste Indeed we may miss these organs without being aware of the want

Assimilation and proliferation are good housekeepers, caring less for earning than for managing the earnings But in earning, expenses are made

The internal organs, those as well of perception and motion as all specifically active in assimilation in the wide sense, are not simultaneously or equally developed, neither do they reach an equal perfection. Some organs belong to fetal life only, others to a late period in life, the most constant organ is the heart, the first and last in action

The law of conservation of energy teaches us that we perceive but variations of things and that all phenomena are the result of various forms of the same energy Only gravitation will not submit to this law, but according to Helmholtz, gravitation or universal pressure is the source of all energies to be considered both in physics and biology

The quantity of heat necessary to raise the tem-

Symptoms usually develop in such cases many years after the injury Should the mental part of the brain be opened up, and if so where is it? When insanity supervenes from trauma the brain, in the vast majority of cases, has undergone permanent change without definite localization What good would opening the skull do, aside from making a fee?

"4 Operation is justifiable in every case of serious suspicion of tumor, abscess, or softening of the frontal (or any other accessible) region "

Stet, with the exception of the word "every," which is too sweeping

5 "Operation is advisable in every insanity following cerebral or meningeal hemorrhage in which localization is possible, the clot accessible and the mental trouble of recent development "

Such combinations are extremely rare, and there is nothing in medical or surgical literature to cause enthusiasm over trephining cases of cerebral hemorrhage The suspicion attaches that death has been precipitated by many such operations, while expectant treatment has been rewarded by a fair number of recoveries, and a large number of partial recoveries Sometimes the operation has restarted a deep-seated hemorrhage and the usual inability to differentiate cortical from basilar or subcortical and inaccessible recent ruptures of vessels make the operation exploratory, which, of itself, is adding to a trouble without reasonable certainty or assurance of benefit The chances for aggravation by trephining outweigh the possibilities of relieving

"6 Every case of insanity developing in the history of otitis media suppurativa deserves immediate exposure of the favorite site of cerebral abscess "

In fact, the simple operation of taking away the temporal bone or a large part of it Exploration of the middle ear, the mastoid cells and a careful study of the case had better precede opening the temporal region The bones may be found carious, an abscess may be evacuated in that neighborhood, but the chances are that an extensive meningo encephalitis is the pathologic condition, in which case less harsh measures would be of more avail, and decidedly less dangerous

"7 Trephining for the purpose of breaking up adhesions of an old meningitis has been successfully practiced though it is not to be strongly advised "

Particularly, if the meningitis is basilar or universal or even covering a large brain area The mere matter of tearing off a few inches of cortex with the adhesions might have some attention Certainty of a very circumscribed, easily accessible and small pachymeningitis offers chances for operating, but more study should previously be accorded the case than the rash operator indulges

"8 Establishment of permanent drainage beneath the scalp is permissible in the beginning of a terminal dementia succeeding chronic hydrocephalus "

What earthly benefit can accrue from interfering with the brain, or even the scalp, of a terminal dement, when the hydrocephalus is compensatory, the cerebral lobes shrunken, *atrophied*, *sclerosed*, every vestige of hope of return of reason vanished as though the head were cut off? The fluid merely fills the space between the shrunken brain and the meninges

"9 Operation for epileptic insanity is advisable whenever there are symptoms pointing to a focal lesion "

This could apply to any Jacksonian epilepsy of cortical origin Such instances are one in a thousand among the insane and the brain disorganization is too advanced to make it a warrantable operation. Observe the extravasations, the leucocytic exudates that have organized at the brain base, the universal heavy dense membranes and adhesions found in epileptic insane autopsies, and then, even with a focal lesion, which is not the only brain trouble, what hope is there from an operation?

"10 Experimental trephining in the early stage of general paralysis of the insane is considered worthy of further trial "

Every such experiment has been a wretched failure, beside too many cases of general paralysis of the insane (paretic dementia) have been improperly diagnosed as such An alienist would feel like throttling an operator who cut into the skull of a maniac, whose chances of recovery are excellent, through mistaking his case for one of paretic dementia, which has been repeatedly done

"11 Operation should be done for even a suspicion of the existence of a gummy deposit in the bone or meninges "

If gummata are in one area they are probably in another, a favorite site is about the pons and in the course of the sixth pair of nerves The removal of a single gumma or group of gummas from one part does not check the disease A vigorous saturation with K I would be all that is primarily warranted and particularly where only a "suspicion" of a gumma existed

"12 The formation of fenestræ in the skull is permissible whenever there is evidence of intracranial pressure, even of unknown origin "Sometimes cerebral pressure is from constipation We have such articles as cathartics, ergot, iodid of potassium, and a neurologist might hit upon some other means of relieving intracranial pressure, if the term intracranial is meant in the sense in which we use the word intrauterine In another intracranial meaning an exostosis, or what is sometimes improperly called an endostosis, may produce brain pressure and the fenestra might help, or it might afford an opportunity for hernia cerebri, which is scarcely desirable "

There is something in Lannelongue's craniotomy (not craniectomy) in cases of primary synostosis to allow the brain room to expand, and if surgeons would allow the alienist to select cases of idiocy and imbecility suitable for operation, instead of rushing into craniotomy with the average surgical unfamiliarity with the insanity, the percentage of successful results would undoubtedly rise Where the brain has undergone permanent retrogradation, and of this the alienist is the best judge, there can be no hope from any treatment

Imagine the resentment of the surgeon were some neurologist to venture advice in a case of intestinal resection, but the alienist has as good a right to feel insulted when a surgeon, who has but the most superficial ideas of psychiatry, promptly takes up his knife and trephine and proceeds to "cure" incurable dements, imbeciles, and other comparatively brainless unfortunates, without seeking advice from those who make such matters a life study There are vast experimental fields left over from the last century in clitoridectomy, circumcision, rectus muscle snipping for insanity, in spite of the failure of the great Chicago "orificialist" with his sphincter cut-

Is visual purple analogous to gastric juice in transforming light into electric irritability? We know the nerve to be a good carrier of irritation on account of its metaplastic nature, but we only presume the form of its disengaged energy to be of the electrical kind, a polarization, termed "nerve current" but not an electric current. I have to repeat yet with emphasis, that blood and nerve have a great stability of their own and that they can not become sick, their normal and abnormal conditions depend entirely upon their respective mother tissue and the surroundings, just as hair and nails do not contract a malady but suffer with the disordered mother tissue.

Nerve irritation is conveyed to the nerve cell to reappear there in a new transformation. But we have to attribute two metaplastic processes to the nerve cell, one as we have seen in the formation of nerve substance and the other in the production of little corpuscles similar to trypsinogen and glycogen which, on nerve irritation, appear as the specific products of the cerebral cells. Their existence is not yet proved by direct observation, but is highly probable according to conclusion by analogy. Every irritation must leave a permanent impression on the products of the cerebral cells, these imprints affecting mind are repeatedly tested, selected, arranged and preserved. Whether the same nerve cell produces nerve substances and these corpuscles, and how the processes in cells and filaments are carried on we do not know.

But we may understand somewhat of the magnitude and diversity of their work when we are informed that the brain contains 600,000,000 of nerve cells and twice and thrice as many filaments connecting them, and if we join anatomy with physiologic activity we take into consideration that many irritations are required for the conception of light, and many more to get the idea of green, of shape, of leaf, of growth and of life, and that the endless series of irritations must be tested, selected, arranged and preserved. These imprints must be regarded as eliminated from the economy becase they are metaplastics. We are aware now of the great consumption and loss resulting from their production. Exhaustion is the natural consequence, but nerve cells do not differ in this from other mother tissue. The difference rests in their restoration only.

Nerve irritation is adequate energy to the corpuscles produced by the cell, but not to the plasm maintaining the same. Repeated irritation and over exertion produce hyperemia and swelling connective tissue, but no impressions in the exhausted cell. Its specific activity ceases.

The exhausted cell is not specifically active, as the nail does not grow in case of fracture of the limb because the connective tissue (in a general sense) is engaged in producing a callus. But there are other factors checking activity of the brain cell, also, as impaired constitution of the plasm, interruption of nerve irritation, poison, shock, hypnosis. The cell in normal condition may be exhausted, but its integrity is not impaired. If there are different influences having the same effect, there must be another cause of sleep which is common to all and different from each. Sleeplessness during nervous excitement, and in neurasthenics, dreams and so on, indicate that periodical exhaustion does not more than induce sleep.

Many animals go well fed into a winter sleep. Certain fishes and amphibia sleep in a similar way during the dry season. Dr Fred Cook, of the Peary expedition, reports that Eskimos are in a semi-comatose condition during the night of several months, that menstruation ceases, that all births are counted from the time of the reappearing sun and that nevertheless they sleep every twelve hours although not exhausted. The temperature of their blood is half a degree higher than ours. And then we know that quietness, darkness and coolness have much to do with sound sleep. All these facts convince us that exhaustion in the cell induces sleep, but that the cell, self-ruling, demands sleep and it puts itself asleep. Sleep is really to be compared with other resources of nature maintaining welfare and life, as hypertrophy, vicarious functions of skin, lungs and kidneys, the changing fur in winter and so on. Muscles hypertrophy in official duty and their action is *en masse*, but nerve cells, active individuals, find relief only in periodical rest.

Pflueger maintained the theory that brain cells are very sensitive to want of oxygen and that this want is the cause of sleep. This theoretical conception is in contradiction with many facts, and it will be necessary to go into details to reach a proper understanding. The plasm of cerebral cells is probably not more sensitive to a want of oxygen than in other cells, but this want seems to be felt mostly at the disengagement in their products forming "imprints."

The condition of the blood has much to do with our mental activity and, on the other side, hard brainwork influences the quality of the blood.

Full blooded youth is intellectually fresher and needs more sleep than the dry stupid senile. He who sleeps dines. Methodical reasoning is less tiresome, clear thinkers as Lessing, do not dream, all such assertions connect with the idea that supply and consumption of blood are in a causative relation to our capability of perceiving and reasoning. But if our thinking should depend on the supply of oxygen exclusively, then the full blooded would be our philosphers and the pale and lean would pass in sleeping the time for action. In fact, Pflueger asserts only, that sound and plentiful blood and especially its oxygen nourishes the cerebral cells. But if we say, these cells feel a want of oxygen not in their sustenance but in their specific action, then all contradictions mentioned above are dissolved and this theory is placed in the right light excepting in one point. We have to place the cause of all vital phenomena in the cells, specifically active.

For this reason we adopt the following explanation of sleep: nerve irritation is followed by reaction in the cell with the result of granules, already separated, being transformed into the specific products, oxygen of the blood is required for this transformation and enters into this chemic change. Nerve irritation fixes the amount of oxygen and partly the quality of grouping. If the plasm be exhausted or the impressions too weak, then the product will be deficient and the imprints are either indistinct, unfit, or they are missing. A correct perception requires a well fed cell, a vigorous irritation and oxygen at disposition.

Besides removing some absurdities of the storing up theory, our conception explains the objectivity that is in every perception. The impression of light is reaction of the cell and is subjective, but the perception of blue is an alteration due to the exciting cause and is objective. We comprehend also the

MIXED CASES

Case 1—Female, aged 46, first came to hospital April 19, 1894, for treatment History deafness for past fifteen years gradually increasing, hears better in a quiet place, considerable tinnitus aurium in both ears, which is always much increased during an attack of acute rhinitis Objective examination both membranes much thickened, slightly hyperemic and moderately retracted

Watch R, 0–60, slight increase after catherization Left 0–60, after politzeration, 0–60 Whispered voice R E, three inches Whispered voice L E, two inches Vertex test (Weber) heard better in right ear Forks right, C, 14–11, C1, 10–4, C2, 26–0, C3, 8–0 C4, 6–0 Left, C, 13–8, C1, 7–4, C2, 25–0, C3, 7–0, C4, 8–0

Nose rhinitis hypertrophica chronica Tubes closed

Treatment the Eustachian catheter, menthol vapor, and an occasional passage of an Eustachian bougie, with the use of the Delstanche masseur, which was employed for six or seven months, with but indifferent results

Three months' use of your pneumatic masseur gave only transient relief from the noises On March 21, 1895, the tinnitus was louder than ever before since being under treatment She had taken fresh cold On April 4, 1895, she reported considerable improvement, and on the 13th, that the tinnitus disappeared from right ear entirely, it remaining in the left, but very feebly Tuning fork tests were made on April 13 with following result

Right, C, 7–10, C2, 10–0, C4, 8–0, Left, C, 8–11, C2, 0–0, C4, 8–0 Watch, right, 1–60 Left, 0–60 Right, whispered voice, eight inches, left, ten inches The masseur treatment will be continued

Case 2—Female, aged 40, housekeeper, first came to hospital for treatment Jan 22, 1895 History afflicted with deafness and tinnitus for many (?) years Three weeks ago took a heavy cold, and has been growing rapidly worse Tinnitus principally left, constant and whistling Objective examination membrana retracted and very cloudy Siegle demonstrated no ankylosis of hammer Chronic follicular pharyngitis, tubes closed

Tests left ear, watch 0–60, after catherization 0–60 Whispered voice two feet, after catherization two feet Vertex test (Weber) heard equally well in both ears Fork test left C, 12–15, C1, 10–5, C2, 10–3, C3, 8–4, C4, 12–4 Treatment electro-pneumatic masseur and Eustachian catheter Two days later reports that the tinnitus is exactly the same, the masseur only gave relief for eight or ten hours Four days later, much improved, the tinnitus remaining away for a longer period after each application

This case gradually improved and finally ceased attending the clinic Ten cases corresponding to those quoted were treated with varying results Some were promptly benefited, while others only experienced amelioration from the existing tinnitus

A The electro-pneumatic masseur affords relief to many patients suffering with tinnitus aurium How permanent this relief may be, must be determined by more extended observation

B The use of the instrument is apparently contraindicated in cases where the existing retraction of the membrana tympani and malleus causes an increased intra-labyrinthine pressure

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CIVIL SERVICE REFORM IN STATE INSTITUTIONS—REORGANIZATION OF THE MEDICAL STAFF

BY BOERNE BETTMAN, M D

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All measures toward reform in the treatment of the insane will prove an utter failure until the manner of appointing the medical staff is radically changed

The superintendent and head of the institution must possess not only the requisite medical skill to fit him for the care and supervision of the patients intrusted to him, but he must also be endowed with executive abilities to maintain a business-like organization and to exact well-disciplined service from a large *personnel* Burdened as he is by multitudinous duties, he naturally is obliged to delegate the treatment to the medical assistants To them is intrusted the diagnosis of the mental complaint and its subsequent treatment Upon them rest great responsibilities

Medical assistants are ordinarily appointed through political or other influences The superintendent is often not consulted in the matter, but is forced to submit to the dictates of others, whose only concern it is to obtain a job for some influential friend Persons absolutely unfit, both by education and character, are thus thrust upon the institution, to the detriment of its insane inmates

The number of physicians in our State asylums is inadequate, one for every four or five hundred patients It is commonly acknowledged that one medical man should take care of no more than two hundred Routine and careless treatment is thus avoided The individuality of each case can be more readily studied The now over-burdened physician has but little time at his disposal for further improvement and recreation

The isolated position of the asylums is another source of danger to the medical mind Far distant from medical centers, cut off from associations with scientific men, deprived in this matter of the stimulus necessary to further improvement and original research, his ardor is either allowed to lie dormant or absolutely to die out for want of encouragement

A laboratory well equipped exists in but one of our State asylums Its value can not be over-estimated It is a necessary adjunct The practical results obtained in medicine are the outcome of the applications of scientific research and investigations. The latest improvements in surgery were only possible after the untiring labors of a Pasteur and Koch The cure for diphtheria and hydrophobia depended upon the cultivation of bacteriology Practitioners have neither the time nor the special qualifications to devote to strictly scientific pursuits A specialist is necessary A pathologist well trained and endowed with the proper zeal is needed for this work His presence will also have a stimulative effect on the medical staff If ambitious, he will imbue others with such a spirit for earnest and conscientious work that enthusiasm will be awakened No individual can perform labor creditably unless he is devoted to his vocation This is especially true in the calling of a physician Constant and untiring research is an especial feature of his life Science is ever making such rapid strides that to keep abreast of the times requires uninterrupted study

To remain at a standstill means stagnation, deterioration The introduction of staff meetings, for the purposes of consultation and discussion of medical themes and analysis of cases, will also call into life, taste for more thorough examinations of and conscientious devotion to the patients These various reasons induced the State Board of Charities to issue a circular letter to the trustees of the four State asylums requesting them, in order to improve upon the present methods, to appoint for each hospital a pathologist and a number of internes

General hospitals the world over, have for years given recent graduates of medicine an opportunity to

naturally will do all in their power to protect from harm the seed which has been planted, so it may sprout and develop into a sturdy plant, which will bear rich and bountiful fruit

SOCIETY PROCEEDINGS

Association of American Medical Colleges

Sixth Annual Meeting, held at the Club House of the Hotel Rennert Baltimore

DR E FLETCHER INGALS, President, in the chair

The minutes of the last meeting were read and approved, upon amendment, changing the records to indicate the presence of the representatives of the University of California and the Western Pennsylvania Medical College of Pittsburg, Pa

DR MICHAEL raised a point denying the legality or regularity of any action taken at San Francisco at the last meeting, as only twenty-three colleges were represented out of a total enrollment of forty one colleges The point was discussed by Drs Millard, Cole, Street, King, White, Roberts, Thomas and Graham The chair ruled this point as not well taken and that a legal meeting was held

Roll call indicated the following named colleges represented by delegate, and were reported to the Secretary as being the official list of the present membership as called for under the amended Constitution and By-Laws [To be published later]

The Secretary submitted his annual report, which was adopted

DR N S DAVIS presided during the reading of the President's Address [To be published later]

Upon motion of DR COLE, the address was adopted and ordered printed and also ordered circulated to all teachers of medicine in the country

Upon motion of Dr Millard, the President appointed a committee consisting of Drs Osler, Baker and Graham to submit the names of distinguished teachers for honorary membership The committee reported the following named persons H P Bowditch, Harvard, Geo H Sternberg, Surg-Gen U S Army, J M DaCosta, University of Pennsylvania; N S Davis, Chicago Medical College, Levi Cooper Lane, Cooper Medical, Hunter McGuire, University Medical College, T Gaillard Thomas, Columbia College The report was adopted and the names reported elected to honorary membership

The Secretary submitted the report of the committee on syllabus, and minimum of requirements, and upon request of the committee the sub committee, consisting of Drs Millard, H A Kelly and Bayard Holmes, were directed to make the necessary amendments and to print the same in the proceedings of the fiscal year

The Constitution was by a unanimous vote amended, to provide that the annual meetings begin Monday, A M, of the week in which is held the meeting of the AMERICAN MEDICAL ASSOCIATION

DR HOLMES presented a paper upon Libraries for Medical Schools, which was read and ordered printed

The following notice of amendment to the Constitution was previously submitted by the Dean of the College of Physicians and Surgeons of Baltimore, to-wit that Sec 4, of Art III of the Constitution be amended to read as follows "Candidates for the degree of Doctor of Medicine in 1904 and thereafter, shall have pursued the study of medicine for a period of four years, and attended at least four courses of lectures of not less than six months' duration each," was read and discussed by Drs Michaels, Holmes, Millard, Cranmer of Omaha, Friedenwald, Culbertson, Davis and Cole Upon vote, the amendment was defeated by a vote of 30 nays to 5 ayes

Upon motion, the action taken at California relating to the curriculum of study was confirmed

The Judicial Council through its Chairman, Dr Dudley S Reynolds, reported as follows in the matter of complaints against the College of Physicians and Surgeons of St Louis the Council reported the methods, as disclosed, in bad taste and not in accord with the rules of the College Association In the matter of the reference of the Ft Wayne Medical College, regarding the matriculation of students, the action of the school was sustained

In the matter of the communication of Dr J A Larrabee of the Hospital Medical College, relating to the action of the Association in expelling the Kentucky School of Med cine from membership in this body, the Council reporte that it had no opinion to express

In the matter of the communication of Thos H Hoove Regent of the Starling Medical College, the Council reporte lack of definite information

The rules submitted by the Judicial Council were adopte

Upon motion of Dr Larrabee, the colleges connected wit the Southern Association of Medical Colleges were invite to make application for membership in this body

In the matter of the application of the College of Phys cians and Surgeons of Boston, and the Woman's Medica College of the Presbyterian Church of Cincinnati, the ques tion of admission to membership was referred to the Jud cial Council with power to act

DR J A LARRABEE moved that the disability of the Ke tucky School of Medicine be removed, and it be permitte to apply for membership The motion was seconded by th Secretary and adopted

In response to a unanimous expression of the Associatio the following named colleges were elected to renewed mem bership the University of Louisville, the Louisville Medica College, the Kentucky School of Medicine

The following officers were elected for the ensuing year President, Wm Osler, First Vice-President, J M Bodine Second Vice-President, W Graham, Secretary and Treas urer, Bayard Holmes Judicial Council, Reynolds, Pancoas and Vaughan

DR COLE of the University of Colorado, submitted th following notice of proposed amendment to the Constitutio and By-Laws, to wit that Sec 4, Art III, be amended t read 'That the preliminary examination provided for, sha be conducted by a Board of Examiners in no wise connecte with a teaching body of a medical college"

Upon motion, adjourned

PERRY H MILLARD, Secretary

PRELIMINARY REPORT OF THE COMMITTEE OF THE ASSOCIATIO OF AMERICAN MEDICAL COLLEGES ON SYLLABUS OF A FOUR YEARS' COURSE OF MEDICAL INSTRUCTION

In presenting this preliminary report your committee a pointed at Baltimore, May 5, finds itself facing a proble requiring much time and study, and an emergency in th evolution of medical education calling for great promptnes Many schools are passing from a three year, and largely u graded course, to a four year graded course The traditio of the past must be violated and no authority or preceden for the new order is at hand

Your committee wishes, therefore, to place before the co leges all the information in its possession, taking a ver broad and liberal view of its duties The reports of th sub committees are given almost always in full In a fe cases it has been necessary to cut them down The comm tee is unable to coördinate and simplify the syllabi, and re ommend a complete syllabus of the full course at this tim It is possible that such a syllabus might be looked upon interfering in a measure with the freedom of the teacher even though it would be advisory only

It is far from the intention of the Association to interfe in any way with the complete liberty of schools or teache in the presentation of medical teaching, or crystallize upo them a course of study which would prevent or delay fu ther progress

So many teachers and so many colleges are calling f help in re-organizing their courses of study, that this incom plete report is offered with the hope that at the next annu meeting of the Association a complete and final syllabu may be handed in Criticism and correspondence is solicite

Before making a syllabus of the minimum required cours of study for the guidance of members of this Association, seems necessary to establish some unit of measure Th most common unit now in use among educators is, perhap the sixty recitation hour unit, or a recitation of one hou each day, five days in the week for twelve weeks, that is fo three months This unit of sixty recitation hours will b used in this report

The following questions naturally present themselves an the discussion shows the present opinions of the committee

1 How much work should be required of the student eac year?

The student can reasonably be expected to work ten hour a day Every recitation or lecture hour should require on and one half hours of preparation Four recitation hour would make the student's working day ten hours long I medical schools the students are old enough and matur enough to stand this amount of work Four recitation hour summer of 1871 Although the number of cases of yellow fever which occurred in the summer and fall of 1871 was small, yet the disease appeared to be of a violent and fatal nature, thus up to October 6, out of thirty-seven cases, which occurred during the preceding sixty-nine days, sixteen terminated fatally, thus giving a mortality of 43 2 per cent , and the active and fatal character of the disease was still further manifest in its comparatively short duration, thus of these sixteen fatal cases, one terminated on the third day, one on the fourth, two on the fifth, five on the sixth, four on the seventh, one on the eighth, one on the ninth, and one on the sixteenth day

According to the official reports of the Board of Health, 114 well marked cases of yellow fever occurred from the date of the first case, July 30, to that of the last, December 18, and of this number fifty-five terminated fatally, that is the mortality reached the extraordinary figure of one death in 2 07 cases, or 48 24 per cent

In the case now under consideration, (Geo C Collingberg) the blood from the cavities of the heart, as well as the black vomit, and the structures of the heart, liver and kidneys were subjected to careful microscopic examination, a few hours after death The blood from the heart presented the characteristic golden colored areola, when dropped upon bibulous paper, and under the microscope the colored blood corpuscles presented a crenated and stellate appearance No animalculæ or sporules, or vegetable organisms were observed, even under the highest powers of the microscope Numerous vibrios were observed in the black vomit taken from the stomach after death The muscular structures of the heart presented a pale, yellowish-brown, flabby appearance and contained much free oil in the form of globules The liver presented the characteristic yellow color, and contained much oil, deposited in the form of oil globules in and around the secretory cells of this organ The kidneys presented a yellowish-brown color, and the excretory tubes were filled with yellow granular matter I injected, by means of a syringe, (the nozzle of which was plunged through the skin) into the cellular tissue of an active dog both black vomit from the stomach and fluid blood from the cavities of the heart, and also applied the black vomit to the mucous membrane of the eyes The animal also swallowed a portion of black vomit and blood, after fasting No ill effects were observed and the animal remained apparently well and active

In the case of Newton Simpson, who was attacked on Oct 11, 1871, and died with urinary suppression and profuse black vomit, on the ninth day of the disease, the textures of the body, divided by the knife, presented the bloody appearance usual in such cases of yellow fever, urea was detected in the blood, brain and liver The heart contained in all its cavities dark fluid blood, which gave an acid reaction at the time of the post-mortem examination, ten hours after death Under the microscope, many of the blood corpuscles presented a crenated, wrinkled appearance, others were swollen, while others again presented the usual appearance

I could after careful examination, with high powers, detach no animalculæ, or simple vegetable or animal forms, although the search was conducted with great care, with powers of various degrees, from one-fourth to one-eighteenth of an inch objectives, and the highest oculars The blood was fluid, with little or no fibrin, and no fibrinous clots, the fibrin was in so small an amount, and in such a soft and unstable condition that it was impossible to determine the quantity. Specific gravity of blood 1046

1,000 parts of blood from the cavities of the heart contained

Water	852 70
Solid residue	147 30
Fibrin	Traces
Saline constituents	9 80

From experiments which I have conducted, it appears that the specific gravity of the blood in the cavities of the heart after death from yellow fever is less than that contained in the large blood vessels This appears to be due to the fact that the heart continues to circulate the blood, or to force it through its cavities during the last moments of life, the red blood corpuscles are arrested in the capillaries, and only the more tenacious constituents of the blood are returned to its cavities during the last moments of life In this case, the spleen was somewhat enlarged and softened, and its "pulp" consisted of numerous colored corpuscles, oil globules and granular masses, but no living animalculæ or vegetable forms were observed Blood corpuscles of spleen not specially altered in appearance Oil globules abundant in spleen

The reaction of the blood from the liver was acid, and at the end of twenty-four hours numerous prismatic crystals, of the triple phosphate of lime, magnesia and ammonia formed in the fluid oozing from the cut surface of the liver The blood of the liver contained numerous oil globules, but no specific animalculæ or vegetable organisms

The results of the microscopic examinations of the structures of the heart, liver and kidneys were similar to those detailed in the report of the case of John Allen

In the case of Jacob Siegarist, age 26, native of Germany, who was attacked Oct 12, 1871, and who suffered with well marked yellow fever, characterized by suppression of urine and alkalin black vomit, and who died on the seventeenth day of the disease, urea and bile were found in the blood and in all the organs, brain, liver, spleen and heart At the necropsy, performed three hours after death, both cavities of the heart contained warm fluid blood, which gave a slight acid reaction to litmus blue paper and upon standing coagulated, forming a soft gelatinous clot which possessed no contractile power The aorta, vena cava and pulmonary veins in like manner contained warm fluid blood, which coagulated imperfectly upon standing

(*To be continued*)

APPENDICITIS

DEDUCTIONS FROM TWO HUNDRED AND SEVEN CASES OPERATED ON, WITH TABULATED REPORT

Read before the Chicago Pathological Society, Dec 10, 1894

BY JOHN B MURPHY, M D

CHICAGO

Professor of Surgery and Clinical Surgery College of Physicians and Surgeons Chicago Professor of Surgery Post Graduate Medical School and Hospital Attending Surgeon to Cook County Hospital Attending Surgeon to Alexian Brothers Hospital Consulting Surgeon to Hospital for Crippled Children etc

(*Continued from page 437*)

I will endeavor to give a short outline of the various conditions found in operating for appendicitis

Study and research in medical laws of the United States, (thesis work), 1 major

Vital statistics, 1 major

Elements in the fluctuation of vital statistic research, (thesis work), 1 major

Laws relating to hospitals in the United States, research, (thesis work), 1 major

State Boards of Health, study of results, origin, laws and evolution research, (thesis work) 1 major

The development of the child to manhood The normal child The abnormal factory child, research, (thesis work), 1 major

Blindness, history, etiology, education of blind in United States, expense, possible reduction of expense, methods (Thesis work), 1 major

The defectives of the United States Origin, cost and possible limitation (Thesis work), 1 major

The Health Officer, his duty and privileges (Lectures), 1 major

Life insurance examinations The duties of the physician and the company, 1 major

The railway and corporation surgeon His duties, privileges and his emergencies (Lectures), 1 major

Child labor Lectures and class research Seminarium, 1 major

These courses may be multiplied, as the resources of the institution increase The same degree should be given to all medical students, on the same amount of work

The seminar and theses courses require much original work and are conducted by a teacher with a small class Two hours, one meeting a week equals five recitation hours, and a major is therefore completed at the end of three months

The following circular was sent out to guide the sub-committees in their work

THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES

Circular of Information to Sub-committees on Syllabus of Studies

Gentlemen—At a regular annual meeting of the Association of American Medical Colleges held in San Francisco, Cal, in June, 1894, the Constitution of the Association was changed, providing that hereafter candidates for the degree of M D be required to have completed attendance upon at least four courses of lectures before receiving a degree Beginning with this year, the course of study is therefore extended to four years, with attendance upon at least four courses of lectures, of not less than six months duration, in different years

The action of the Association upon this most important move was substantially unanimous

There was likewise appointed at this session, a General Committee on "Minimum of Requirements" and "Syllabus of Lectures" The committee consists of the following named persons, to-wit Professors P S Conner, of Cincinnati, Ohio, C B Stemen, of Fort Wayne, Ind, Victor C Vaughan, of Ann Arbor, Mich, Wm E Quine, N S Davis Jr, and E Fletcher Ingals, of Chicago, Ill, and Perry H Millard, of St Paul, Minn

It is the purpose of this committee to aid in bringing about greater uniformity in the methods of admission of students to the study of medicine, in the admission of students to advanced standing with credits from other colleges, in the classification of students and in methods of instruction

The General Committee held its first meeting in Chicago, Nov 30, 1894 It was deemed advisable to act with deliberation and seek the advice and coöperation of some of the leading educators of the country in the preparation of a syllabus, and to divide the work of its preparation into a number of sub-committees, corresponding in number to the number of different chairs to be represented in the proposed four years' course

By resolution of the General Committee, the different chairmen are at liberty to enlarge the number of their committee, or to perform their work without assistance The following named persons were selected to serve as Chairmen of the different sub-committees, to wit

History and Embryology, T Mitchell Pruden, New York
Anatomy, Thomas Dwight, Boston
Physiology, Henry P Bowditch, Boston
Chemistry, Walter S Haines, Chicago
Bacteriology, Roswell Park, Buffalo
Hygiene, Victor C Vaughan, Ann Arbor
Medical Jurisprudence, B S Folsom, Boston
Materia Medica and Therapeutics, H C Wood, Philadelphia
Practice, Wm Osler, Baltimore
Gynecology, Howard A Kelly, Baltimore
Surgery, P S Conner, Cincinnati
Obstetrics, W W Jaggard, Chicago
Pathology, Wm Welch, Baltimore
Mental and Nervous, Daniel R Brower, Chicago
Diagnosis of the Chest and Physical Diagnosis, E Fletcher Ingals, Chicago
Ophthalmology, E L Holmes, Chicago
Otology, Henry Gradle, Chicago
Pædology, T M Rotch, Boston
Genito-Urinary, J H Dunn, Minneapolis
Orthopedia, Virgil C Gibney, New York
Laryngology, James N Mackenzie, Baltimore
History of Medicine, N S Davis, Chicago

The sub-committees are requested to report, covering the following points in particular

1 In a four years' course of not less than eight months' duration each year, how much time do you suggest be devoted to your branch?

2 Of the whole number of hours recommended, how divide as to didactic, laboratory, recitation and clinical instruction?

3 At what time in a four years' course should the instruction in your branch be afforded?

4 Any suggestions of subjects to precede your branch before permitting the student to enter upon the same?

5 Is it wise to credit work done in other schools, or would you recommend that students be admitted to advanced standing, only after an individual examination in each branch, below the class the student may desire to enter?

6 Suggest a rule for the classification and grading of students suitable to a four years' graded course of instruction

7 Prepare a detailed syllabus of the topics you deem suitable for instruction in your branch, and their manner of presentation to the student

It is intended to combine the report of the several committees and issue the same as "A Syllabus for the Use of Teachers and Students of Medicine"

The members of the different committees are requested to submit their reports to the Secretary at St Paul, Minn, not later than March 1, 1895 A joint meeting of the General and sub committees will occur before the meeting of the Association, which took place in Baltimore in May of the present year Respectfully submitted,

Perry H Millard, M D,
Secretary Association American Medical Colleges

REPORT OF SUB COMMITTEE ON MATERIA MEDICA

In a four years' course of not less than eight months' duration each year, materia medica and therapeutics should receive attention during three of these years, viz, the second, third and fourth years Instruction should be given as a graded course

First Year Introductory Work Botany—By beginning the study of materia medica the second year in the course, the student has an opportunity to receive instruction in botany and chemistry during the first year Botanical knowledge should be insisted upon, and the necessary instruction for the acquirement of such knowledge should consist of at least thirty hours devoted to lectures or recitations with some additional time for laboratory work

Second Year Materia Medica—During the second year, two hours weekly should be devoted to the study of materia medica, giving special attention to pharmacognosy and pharmacology Such instruction should by preference be given in the laboratory and supplemented by recitations

Third Year Therapeutics—Two hours weekly for the school year, should be given to therapeutics studied from the drug standpoint Such instruction may be given by lectures In this work, drugs may be studied individually, as represented by such writers as Waring and Ringer, or collectively as represented by the works of H C Wood, Bartholow, etc

Fourth Year Therapeutics—Two hours weekly, for th school year, should be given to the subject of therapeutic studied from the standpoint of disease Such instructio should be given by didactic and clinical lectures T character of such work is well represented by Hare's "S tem of Practical Therapeutics" H M Bracken, M D,

Professor Materia Medica and Therapeutics,
University of Minnesota

REPORT OF SUB-COMMITTEE ON ANATOMY

[In conformity with your request of April 19, I make the inclosed suggestions regarding the character and order of

Number of case	Date of operation	Name of patient	Operator	Male	Female	Number of attacks before operation	Age of patient	Ulcerative appendicitis	Gangrene of appendix	Perforation of appendix	Tuberculosis of appendix	Appendix *non* adherent	Appendix adherent	Appendix gangrenous and detached	Foreign body	Enterolith	Time of operation after attack, days	Recurrence after simple drainage	Rupture of abscess into urinary bladder	Circumscribed abscess, peritoneal cavity not opened	Abscess intra peritoneal, peritoneal cavity opened	Septic peritonitis without limiting or with incomplete limiting adhesions	General septic peritonitis with no adhesions	General septic peritonitis with incomplete adhesions	Rupture of circumscribed abscess into peritoneal cavity	Secondary local abscess into a different part of abdominal cavity	Appendicectomy during attack	Appendicectomy between attacks	Fecal fistula	Fatal sapremia	Pyemia
146	18-5 94	J T	M	1		3	50						1				10			1											
147	24-5 94	C C	'	1		3	36										11			1											
148	26 5 94	Mrs T	"		1		28	1	1	1		1					11				1		1				1			1	
149	28 5-94	L	"	1			56										9			1											
150	28-5 94	L W P	'	1			41	1				1					20 h										1				
151	1-6-94	O H	"	1			24			1			1				5				1						1				
152	4-6-94	A M	"		1	5	27		1	1			1				3				1						1				
153	10-6-94	N	"	1			40		1	1			1			1	4				1	1			1		1				
154	6 7 94	W	'	1			50		1	1			1				4						1				1			1	
155	6 7 94	A L	'	1			26						1				14												1		
156	8-7 94	O	'	1			45										8				1										
157	9 7 94	G	'	1			22										4				1		1								
158	19 7 94	I G	"	1			16		1				1			1	9			1							1				
159	23 7 94	T	"	1		1	19						1				8	1			1										
160	24 7 94	G G	"	1			18		1	1			1			1	4							1			1				
161	25-7 94	C	"	1			28		1	1			1				7				1						1				
162	6-8-94	S	"		1		16	1				1					2										1				
163	7-8 94	McG	"		1	2	42						1															1			
164	17 8 94	R	"	1			50													1									1		
165	24-8 94	A S	"	1		5	22						1			1												1			
166	4 9 94	M D	'		1		6		1				1			1	4				1						1				
167	4 9-94	J C K	"	1			35										10				1										
168	5 9-94	W B	"	1		2	14		1	1		1	1			1	5						1				1				
169	9-9 94	A J	'	1			20		1	1							6				1			1	1		1				
170	9 9 94	F	"	1			19		1	1		1				1	33 h						1				1				
171	11 9 94	B	"		1		11						1			1	7				1										
172	13 9 94	M	"		1		14										10				1			1							
173	22 9 94	D D	"	1		11							1					1													
174	22 9-94	A E	'	1			28										5														
175	26-9 94	G T H	'	1		1	24										6				1						1				
176	27 9-94	A H	"	1			8		1	1			1			1	4				1						1				
177	14 10-94	J C	'	1			18										9														
178	16 10-94	C E	"	1		1	37			1			1				21		1		1							1			
179	21 10 94	B P	"		1	12	21	1			1						36 h				1	1		1							
180	23-10 94	B P	"	1		1	27		1	2			1			3	9				1						1				
181	30 10-94	M P	"		1	10	16		1	2			1								1						1				
182	6-11 94	R A	"	1		7	24		1				1				15 h										1				
183	8-11 94	C B	'	1			31		1				1				5				1					1		1			
184	10 11 94	M T	'		1		16	1	1	1			1				18 h									9					
185	20-11 94	C E	"	1			28		1	1			1				8				1				1		1				
186	25 11 94	P	"	1			10		1	1			1			1	8				1						1				
187	26 11 94	B	"		1		9										14			1											
188	26-11 94	P	"	1			22			1			1			1	9				1						1				
189	30-11 94	W K	"	1			10			1			1			1	50 h				1						1				
190	6 12 94	T	'	1		1	17						1				8				1										
191	8 12 94	E	"	1			22						1				10				1										
192	10-12 94	B S O'C	"	1		3	52						1				12											1			
193	15 12 94	J S	"	1		1	25	1					1				23 h										1				
194	20 12 94	E B	"		1	1	26	1	1				1				8				1						1				
195	26-12 94	G M	'	1			21		1	1			1			1	9				1						1				
196	27-12 94	Miss X	"		1			1					1				6				1						1				
197	31 12 94	F M	"	1			18										11				1										
198	2 1 95	G	"	1			18	1		1			1				30 h				1						1				
199	4 1 95	G H C	"	1		3	26	1									4										1				
200	15 1 95	X	"	1			36																				1				
201	27 1 95	J E	'	1			15			1			1			1	3				1						1				
202	1 2 95	A H	'	1			25		1	1			1			1	82 h				1			1			1				
203	2 2 95	M	"		1		11		1	1			1				72				1						1				
204	2 2 95	J B	'	1			26		1	1			1				80				1			1			1				
205	4 2	C O	'	1			30		1					1	1	1	52				1						1				
206	16-2	M H	"	1		2	18							1	1		1										1				
207	21 2	M D	"		1		8							1	1		8										1				

exceedingly broad that unless some limitation of this kind is practiced, many subjects of the deepest interest in medicine must necessarily be omitted.

While, as before stated, practically all the work in chemistry may be completed in the first two years of the four years' course, yet it would seem highly advantageous to introduce a small amount of instruction in what might be called clinical chemistry into the last year. One exercise a week might be given to the work, chiefly perhaps in the laboratory, when the examination of urine, gastric juice, and other secretions, tests for the more important elements and compounds, and the incompatibility of drugs in prescriptions could be reviewed. This would afford an excellent means of reviving a knowledge of the more important parts of medical chemistry, and the practical value of this department would then be more fully appreciated than before, since the student, having acquired a greater knowledge of disease, would be in a position to appreciate the relation of chemistry to morbid processes, their recognition and their treatment.

Your sub-committee would suggest that students coming from other colleges, belonging to this Association, receive credit for work already done in the other institution, upon presentation of a certificate from the professor of chemistry, or from the dean or secretary of the other college. It would also seem desirable that students who have taken at least two years of didactic and practical chemistry in high grade literary and scientific schools, and graduates of colleges of dentistry and pharmacy should be admitted without examination to the second year of chemistry in the medical college, upon presenting a proper certificate of work from the other institution.

In conclusion, your sub-committee would state its entire agreement with the views presented by Professor Huxley a number of years ago, that the study of general chemistry has no proper place in the curriculum of a medical college, *that this should precede the study of medicine, and that* medical chemistry alone should be taught in medical schools. It is certainly to be hoped that this opinion may be adopted by this Association, and that, before many years have passed by, a good knowledge of general chemistry will be required for admission to Association colleges. Instruction in chemistry in the medical college, then, could be confined to its legitimate field—medical chemistry, and, with an abundance of time for its study, the subject would quickly assume its rightful place as one of the most interesting, important, and profitable parts of medical learning.

Respectfully submitted,
Walter S. Haines, M.D., Rush Medical College.

(To be continued.)

Kentucky State Medical Society.

Abstract of the Proceedings of the Fortieth Annual Meeting, held at Harrodsburg, June 12, 13 and 14, 1895.

First Day—Afternoon Session.

The Society convened in the court-house and was called to order by the President, Dr. J. B. Marvin, of Louisville.

Prayer was offered by the Rev. Dr. W. O. Goodloe.

An eloquent Address of Welcome was delivered by the Hon. Ben Lee Hardin.

The Committee of Arrangements then made its report.

The reports of the Permanent Secretary and Treasurer were next read and adopted.

There being no further routine business to be disposed of at this time, the reading of papers was proceeded with.

Dr. William Bailey, of Louisville, read a paper entitled "Sanitation in Connection with Diphtheria," in which he said that in order to intelligently discuss diphtheria we must first take sanitation into consideration. Great credit was due to the work that had been done by bacteriologists. He had no new theory to advance as to the cause of the disease. It is a specific disease, due to a specific cause, which is always present when the disease exists. The consensus of opinion among those prepared to judge was that the Klebs-Loffler bacillus was the specific germ responsible for the production of the disease, hence the work to do in diphtheria was to destroy the germ or to restrict its activity. The isolation of cases should be as complete as in cases of smallpox. The room selected for the sick should, by preference, be at the top of the house and completely cut off from other parts of the house. The room should be denuded of hangings and belongings in order to facilitate the necessary disinfection afterward. Dr. Bailey then briefly referred to the antitoxin treatment in the prevention of diphtheria.

Dr. Carl Weidner, of Louisville, read a paper on "Pathology and Bacteriology of Diphtheria." A disease which corresponds to the clinical picture of to-day seems to have existed as far back as we can trace medical history. The disease appeared in the New England States in the eighteenth century. Diphtheria was a specific disease *sui generis*. Our literature in regard to it is becoming more voluminous from year to year, and clinical investigations are following one another in rapid succession. The work of several eminent investigators was mentioned along this line. The author emphasized the importance of knowing the cause of things, and quoted the words of an eminent practitioner: "First to know, then to heal." He next dwelt upon the different micrococci, but more particularly the Klebs-Löffler bacillus. The investigations made from 1887 to 1889 demonstrated conclusively that the true and only cause of diphtheria was the Klebs-Loffler bacillus. Many investigators have since reported cases of suspected diphtheria in which the bacillus found corresponded in every way with that described by Löffler, but all cases in which the bacillus of Loffler is not found are now considered pseudo-diphtheria. From a prognostic standpoint it is important to make a distinction between diphtheria produced by the bacillus of Loffler and pseudo diphtheria.

Dr. W. McClure, of Lexington, followed with a paper on

CLINICAL DIAGNOSIS AND LOCAL TREATMENT OF DIPHTHERIA.

The author showed that mere clinical diagnosis is extremely unreliable and should never be relied upon where more accurate diagnostic means are at hand. In support of this statement, he cited the fact that in 1893 the New York City Board of Health instituted a series of bacteriologic examinations, and, according to their report, examined 5,611 cases that had been clinically diagnosed diphtheria. Of this number the Klebs-Loffler bacillus was found in 3,255 cases, while in the remaining 1,540 cases no Klebs-Loffler bacilli were found. *It will thus be seen that the number of mistaken diagnoses amounted to 32 per cent.* The author in his argument proceeded with the assumption, which he thinks has been clearly proved, that there is no true case of diphtheria without the presence of the Klebs-Loffler bacillus, which he regards as the specific agent. In most cases there is a prodromal stage lasting a few days, resembling a catarrhal pharyngitis. There is a slight fever together with painful deglutition, more marked when swallowing liquids than solids, headache and occasional vomiting.

Of the numerous remedies used locally in the treatment of the disease, the ones that are most generally resorted to and have given the greatest satisfaction are chlorate of potassium, nitrate of silver, chromic acid, iodin, corrosive sublimate, methyl blue, tincture of iron, carbolic acid, and peroxid of hydrogen. The tincture of iron is mostly beneficial on account of the free hydrochloric acid it contains. The nitrate of silver is but a superficial caustic, while chromic acid is too heroic in its caustic effects. In peroxid of hydrogen we have a valuable adjunct *in the treatment of diphtheria*, when judiciously and skillfully used. It is a valuable aid in diagnosis, as by its application to the throat, if there be but a small trace of membrane, it causes it to assume a white color and on this a fine foam to rise, caused by the liberation of oxygen gas.

Dr. Thomas Hunt Stucky, of Louisville, presented a paper on "Sequelæ and General Treatment of Diphtheria." The most important sequelæ are paralyses, which may follow mild as well as severe cases. Paralysis occurs in from 15 to 20 per cent. of the usual run of cases. In the more malignant cases paralysis occurs in about 40 per cent. The palate is most usually affected. The organ of special sense most affected is the eye. Speech, like other senses, is not involved. *Brachycardia and tachycardia may be observed in the same patient.* The Klebs-Loffler bacillus and streptococci have a tendency to produce exudates and pseudo membranes. The latter are examples of mixed infection. Dr. Stucky then referred to the rapid strides that have been made by the introduction of antitoxins in the prevention of diphtheria. The most noteworthy point about the antitoxin treatment is that we know nothing about its definite composition, and no one has undertaken to give us an analysis. Supportive treatment was next referred to. The treatment may be summed up thus: 1, prophylaxis; 2, hygiene of the sick room; 3, local applications. Local treatment is of little value as a curative measure. When the lesion is once established gargles are useless. The treatment of special symptoms, such as paralysis, call for strychnia or other tonics; massage, or the electric current may be used; also the hypodermic injection of antitoxins, if there is cardiac clearly explained, but I believe it a reflex phenomenon as we have exactly the same symptoms produced in obstruction of the ductus cysticus with gall stone The appendix in cases of this kind is very much enlarged at the distal end—small at the proximal, its mucous membrane is thickened and contains a large quantity of hardened feces

The mortality in my cases, including all grades, and operating on every case of appendicitis, favorable or otherwise, which came under my observation, is 9 93 per cent Total number of cases operated to date 207 The following is a tabulated form of the cases operated on since my last publication, March, 1894

In the literature of this subject, I wish to call attention particularly to the contributions, each presenting various phases of the disease to a greater advantage than the other, of McFadden Gaston, Kraft, McBurney, Fowler, Maurice Richardson, Bryant, Shrady, Wyeth, Sonnenburg, Robt T Morris, Senn and McArthur

DISCUSSION

Dr D W Graham—In making a post mortem a few weeks ago, searching for the cause of death, the appendix was examined and it was a good illustration of what we might call an abnormally developed appendix seven inches long It was not bent on itself but was lying between the abdominal wall and the ascending colon, the end resting against the liver over the kidney, and was perfectly normal in structure It hardly had a mesentery at all, but was simply embedded in the peritoneum, at the line of reflection from the large intestine, on to the abdominal wall, and was perfectly straight

I am satisfied that we have an anatomical deviation from what is called the average normal size and position of the appendix more frequently than is generally supposed, and I am satisfied also that it accounts for many cases which seem to be very erratic in behavior Those cases, for instance, which Dr Murphy has described where the abscess appears on the left side, I believe are accounted for by an abnormally long, displaced appendix If the appendix I have described had become inflamed and an abscess had formed about its tip the abscess would have been in close connection with the liver and kidney, so that the most probable diagnosis would have been abscess in connection with the liver, or a perinephritic abscess I recall a case where the attending physician had made a diagnosis of suppuration of the liver where the early history seemed to point to the appendix, but an abscess could be made out I did not make any exploration but simply opened a large abscess and drained and in the course of two or three days the usual fecal stone appeared, showing that it was a case of appendicitis and perforation I think more attention should be paid to the point I have mentioned, in studying the pathologic anatomy of appendicitis

Dr A I Bouffleur—It is somewhat gratifying to note that we are gradually coming around to a position where we admit that we do not know very much about what we have to deal with when we have a case of appendicitis, and we must also admit that we do not know when we should operate, unless it be immediately, as soon as we recognize the case as one of appendicitis I think it is generally the case now that surgeons especially, will admit that there is no such thing as stating what appendix is going to slough off, become neurotic and perforate, or what one is going to recover Such being the case we have a good deal yet to look forward to in the line of the true conditions present in the different cases That we may hope some time to be able to distinguish clinically between a catarrhal appendicitis and a destructive form of appendicitis is certainly something we must look forward to with considerable pleasure, but that we will ever reach that status I am not now thoroughly convinced The specimens Dr Murphy presents to us this evening are illustrative of some of the conditions from a pathologic standpoint which I think would bear a little further consideration in addition to that given by him In the first case, the one in the large bottle, we have an appendix of reasonable length which is not especially thickened but has at the distal part about an inch of the surface of the mucous membrane which is distinctly necrotic Now the reason for this necrosis is that there has been a thrombosis of the artery which supplies the appendix, which according to Fowler is usually a terminal artery or there has been a very intense inflammation which is always of microbic origin If a thrombus forms in this artery we are sure to have destruction of the appendix beyond that point Sometimes the artery goes to the end without giving off branches and then returns, in which case we will have destructive necrosis between the point of obstruction and the base of the appendix When we have a case before us we do not know, whether in the course of a few hours that mucous membrane will necrose from the intense inflammation or necrose as a secondary process to the obstruction of that vessel, and as a matter of fact it does not matter much, because both usually result in perforation and serious trouble The next specimen calls up the inevitable stone, which as a matter of fact probably, plays a very small part in the production of appendicitis I think the stone theory of appendicitis is losing ground rapidly While it is present quite frequently yet it by no means has the prominence it formerly had in the production of this disease It is asserted that the stone causes necrosis simply by pressure The ordinary collection of feces which we find is so soft and small, compared to the lumen of the tube it could not possibly cause destruction in that way, but occasionally we do find one large enough and hard enough to cause pressure necrosis The percentage of these little collections of feces that are hard enough to cause pressure atrophy is so small, according to Fowler that we may look upon that as being practically no special cause at all Furthermore, if you will take occasion to examine the appendix in laparotomies where it is supposed to be normal you will find in the large majority of appendices these small collections of feces, without any symptoms of appendicitis The third specimen, the recurrent one, I think is a very good illustration of what some prominent Eastern operator has found in cases of recurrent appendicitis, namely, that it is a parietal inflammation, in other words, there is more than the mucous membrane involved Dr Murphy spoke of this as a catarrhal inflammation, which is probably true of the mucous membrane, but here there is also, from ocular inspection through the bottle, considerable thickening of the interstitial tissue of the wall In that case we have what is described as the second stage of appendicitis, or at least that stage which is manifest in the recurrent type or interstitial form of appendicitis In addition, we have the next stage with the peritoneum involved This classification is a convenient one and we may in time be able to differentiate between the three anatomic forms, but since the wall of the appendix is so thin and the infection is usually intense, we have rapid involvement of all the coats of the appendix which not infrequently ends in destruction In view of the fact that we are as yet unable to determine which case is going to terminate fatally within a few hours, and also that an operation when delayed, is practically useless in these cases, the primary or early operation is gaining favor very rapidly, and as it can be safely performed under the ordinary circumstances surrounding one in a house, it has a great many things in its favor as a legitimate operation It is an easy and safe procedure unless too much is attempted Emphasis should be placed upon the fact that it is not always necessary to remove an appendix to relieve the emergency of your patient's condition In cases attended with abscess formation the mere opening of the abscess with thorough drainage will tide the patient over the emergency condition and enable you to subsequently remove the appendix under much more favorable conditions and give the patient permanent relief with the least amount of danger I have seen two cases in which I am convinced, had I let the appendix alone, merely draining at that time and at a subsequent time removed the appendix, I would have given my patient a much better chance for recovery from the primary trouble and ultimate recovery from the whole trouble

Again, as to the point Dr Graham makes, I would say that the position he mentions is one of the recognized normal positions of the appendix, posterior to the cecum We have four or five positions recognized as being normal although some are quite rare, and that is the reason why we have a change in the location of the abscess cavity, but when the appendix is involved the change in the location of the pain is as a rule very slight, if the appendix is on the right side of the body, the first pain being generally referred to indefinite parts of the abdomen, the second pain being referred to what is called McBurney's point

Dr Le Count—I was very much interested in the last case reported by Dr Murphy, where the appendix laid behind the cecum underneath the peritoneum In the great majority of cases the appendix lies in the true pelvis on the right side, less often it is found behind the cecum, two the most generally practiced, though it has been somewhat modified by different surgeons Dawbarn, of New York City, makes quite a material modification of Bassini's operation in transplanting the testicle from the scrotum to a point just inside the internal ring behind the peritoneum Considering the statistics made during the last five years only, we find an astonishingly small fatality following this operation Bassini reports 560 successful cases of his operation without a death, Marcy did over 200 with no mortality, Macewan 81 cases without a death, and Coley did 200 operations with one death, and this was due to double pneumonia on the eighth day the result of ether

Dr Frederick P Henry, of Philadelphia, Pa, read a paper entitled "Remarks on Chlorosis and its Treatment" He said the chief predisposing causes of chlorosis are to be found in age, sex and constitution The principal of these predisposing causes is, he believes, a congenital tendency to anemia The exciting causes are those of anemia in general, such as insufficient food, light, air, and exercise, overwork, either mental or physical, anxiety, grief, and nervous excitement in general The anatomic characters were next considered at length The complications of chlorosis are phthisis, gastric ulcer, chorea, and exophthalmic goitre As regards the treatment, the remarkable efficacy of iron was referred to when used in the initial stage Nearly all chlorotics are dyspeptic, and until the digestive disorder is relieved the full benefit of iron can not be obtained In cases of atonic dyspepsia, the simple bitters, such as gentian or exciters of the smooth muscular fibers, such as strychnia or brucia, may be administered before meals, or if there is gastric dilatation, naphthol, salicylate of bismuth, or chloroform water may be given three or four hours after meals, as recommended by Le Gendre, in order to limit or stop the abnormal fermentation generally present in that condition

Dr Louis Frank, of Louisville, read a paper on "Treatment of Puerperal Sepsis" The author first dwelt upon the etiology and pathology of this form of sepsis Preëxisting gonorrhea may cause sepsis, as may any pathologic condition of the genital organs which antedates delivery The conditions are often not discovered until too late to institute prophylaxis Notwithstanding the fact that infection is most frequently conveyed by the hands, instruments, and dressings of the obstetrician or nurse, there may also be local conditions in the genital tract below the internal os which play an active part in permitting infection, and without which it would not occur The treatment he considered under several heads 1, those cases where the infection is the result not directly but indirectly of tears in the soft parts, there being a localized suppuration at these points, 2, those cases where septic endometritis exists, 3, where pus tubes or sacs in the broad ligaments are found, 4, purulent metritis and parenchymatous metritis, 5 purulent peritonitis, 6, sapremia, septicemia or pyemia

Dr Curran Pope, of Louisville, read a paper on

SOME REFLECTIONS ON THE CAUSATION AND THERAPEUTICS OF NERVOUS DISEASES

The medical mind has been recently directed toward the presence and excess of uric acid in the excretions of persons suffering from various forms of nervous troubles, and some French investigators go so far as to state that nervous diseases and uric acid are one and the same thing This is based largely upon the investigations and statements of Haig and Bouchard whose experiments are marked by unexcelled brilliancy Dr Pope is constrained to believe, however, that the deductions therefrom are erroneous He believes that the position assumed by Hertor and Horbaczewski is correct, and that uric acid largely derived from nuclein is the detritus of tissue waste and a resultant of nerve functioning, in other words, the presence of uric acid is an indication and a manifestation of nutritive and digestive disturbance It is the result of nutritive disturbances going on in the body where so many minute vito-chemic reactions take place

Considerable experience in the treatment of all forms of nervous disease has taught the author, in many instances, that elimination must precede nutritional treatment, and he had seen few cases that had not been benefited by this line of treatment, strictly individualized in its application to the case in hand In his opinion hydrotherapy is by far the most satisfactory, pliable and useful remedy that the medical profession possesses, and after some years of experience with it he does not hesitate to say that he believes this agent, cautiously and carefully applied *by a physician thoroughly* trained in its application, to be the very best means for the correction of disordered nerve force, the elimination of waste products, and the toning of the vasomotor system

Second Day—Afternoon Session

The first paper read at this session was by Dr H J Cowan, of Danville, entitled "A Case of Monocular Albuminuric Retinitis—Recovery"

Dr J Morrison Ray, of Louisville, read a paper on "The Blind of Kentucky"

Dr Horace H Grant, of Louisville, read a paper entitled "Comparative Value of Mechanical Devices in Making Intestinal Anastomosis," and Dr August Schachner, of Louisville, one on "Modern Methods of Intestinal Anastomosis"

These papers considered all known mechanical devices for performing intestinal anastomosis up to date, and the deductions drawn incline to the belief that the day is not far distant when surgeons will return to the old method of suturing the bowel without the aid of mechanical devices

Dr Henry E Tuley, of Louisville, read a paper entitled

THE CARE OF THE NEWBORN

The question of the care and management of the newborn child has so long been relegated to ignorant mothers and nurses, that a consideration of the subject by medical men is opportune The danger of septicemia threatens every newborn child through the medium of the cord We know that tetanus, erysipelas and diphtheria occur in the young infant, the infecting organism gaining entrance through the cord The cord should be tied in two places, about one inch apart, with a strong ligature which has been previously sterilized, extra care being exercised in tying those cords which contain a large amount of Wharton's jelly, as the shrinkage of this may cause the ligature to slip and a dangerous hemorrhage ensue

Relative to feeding, it is hardly necessary to state that unless some physical condition precludes, all infants should be given nature's food—mother's milk Immediately after birth the child should be anointed thoroughly with vaselin or olive oil, not with lard, on account of the salt which it contains, then wrapped in a shawl or blanket and laid away for at least twelve hours, before it is bathed and dressed and given to its mother for the first nursing During the first six hours the cord should be examined frequently for hemorrhage The child's temperature should be taken twice daily for at least one week after birth Should the child be getting an insufficient quantity of milk it will have an elevation of temperature from 1 to 4 degrees above normal

The important precaution to prevent thrush or sprue is the regular cleansing of the child's mouth before and after each nursing, which can be done by means of a cotton swab on the finger wet with a saturated solution of boracic acid Instructions should be given for the proper care of the buttocks

Dr M F Coomes, of Louisville, read a paper on "Stricture of the Esophagus" Strictures of the esophagus occur mostly in children, and were generally due to traumatism Cases occur more frequently in the United States than in any other part of the world, for the reason that American housewives made use of lime, whereas in England, Germany *and other countries they did not use it American children* got hold of this lime and swallowed it

Dr Geo S Davis, of Salvisa, read a paper on the "Treatment of Pneumonia"

Dr J G Carpenter, of Stanford, followed with a paper on "Abdominal Surgery in the Country" He said that Dr John Craig, of Stanford, operated on a woman 80 years of age for an abdominal tumor in 1850 There was a large sac, containing many smaller ones, all filled with fluid, and the tumor weighed fourteen pounds The abdomen was opened in the median line, and the tumor was a multilocular ovarian cyst Similar operations were referred to as having been done in the country in farm-houses by Dr Craig and his assistants Dr Carpenter said the best results in the past had been obtained in the country in farm-houses, out of hospitals, and by country surgeons, as had been claimed both by Price and Tait

Dr Geo Beeler, of Clinton, read a paper on "Milk Sickness," in which he reported several interesting cases occurring in the practice of himself and others From the aggravated character of the disease, its successful treatment requires great discrimination and experience

Dr S G Dabney, of Louisville, read a paper on "Phlyctenular Ophthalmia"

(*To be continued*)

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and the blue or negative conductor The system, as a whole, may thus be said to be divided into two multiple arc sections or divisions, one on the positive and the other on the negative side of the middle wire, and these divisions are in series with each other, the larger portion of the current passing out on the positive, through the two groups successively and returning by the negative While the system is balanced, that is while an equal number of lamps is operated in multiple arc in each of the two groups in series, the middle conductor by which these two groups are connected serves simply to carry the current from one subdivision of the positive section to one or more subdivisions of the negative section, and so simply has an 'intergroup" function

But as one of the objects of the invention is to allow of the individual control of every lamp, without affecting any other lamp, we find that when one of the positive multiple arc subdivisions is turned out, the dynamo on that side will send less current to the system, while the dynamo on the other side supplying the negative division will continue to send the same current as before, but the fraction of its current which is not needed by the remaining lamps on the positive side will pass up the middle wire and join near the lamps the current which has passed *through the remaining positive lamps, forming with them a* volume sufficient for the negative side If, on the contrary, a reduction were made on the negative side, the current produced by the negative dynamo would be lessened and the excess of current on the positive side which was not needed on the negative would flow from the lamps toward the dynamo, through the middle conductor, thus making this middle conductor perform a compensating function between the two multiple arc groups which are operated in series

By such a system as this thirty lamps, for example, may be operated by one-half the current which would be required if they were connected in simple multiple arc, and as a consequence of this reduction of current, the outgoing and return conductors may each be made one-half the size that would be required in the simple parallel system In addition to this, inasmuch as this one-half the current is projected through the conductors with twice the pressure that would be exerted in a simple multiple arc system, the use of this double pressure allows of the further reduction of one half in the size of the positive and negative conductors In short, if the two outside conductors are each made one-quarter as large as before, they will perform their work as economically as before when connected in the manner shown in Fig 11 The addition of the middle conductor (if of the same size as those on the outside), raises the expenditure of copper to three-eighths of that required in the simple parallel system

A careful inspection of this figure, in connection with the numbers placed along the conductors indicating that current for so many lamps is flowing at the particular point at which the numbers are located, will show that the middle wire carries but small currents for any distance, that these small currents are in some parts of the system in one direction, in other parts in the opposite direction, and that in some sections of the middle conductor there is no current at all This state of things exemplifies the normal functions of the compensating wire of the three-wire method, and it is because of this practical perfection of compensation that all the devices are independently controllable It is usually considered necessary to provide each of the dynamos of such a system with means of independent regulation, so that if the circuit becomes materially unbalanced, the dynamos can be properly adjusted with relation to each other so that each will generate the total E M F necessary to do its work successfully In practice, however, where more than a half dozen lamps are to be placed upon one service, that is to say in one building or area, a branch from each of the three wires is introduced into the building and the translators are so connected as to place an equal number on each side of the middle wire Thus a very close approximation to a local balance is maintained throughout the system, and departures from a close total balance are comparatively rare

The incandescent lamps ordinarily operated on a system of this kind are made to work with 110 to 120 volts, according to circumstances If such lamps could be successfully made for 220 to 240 volts and of the same candle power as at present, they might be connected across the outside wires of the three wire system, inasmuch as each of the three wire dynamos delivers a voltage equal to that required by lamps of the present type With such high volt lamps a system could be operated with all the economy of the present three wire system as to cost of copper and drop in the conductors, and the middle wire might be omitted Or, if such lamps were to be built for general use (and they have constructed in limited numbers) they might be connected with a three wire system as the 110 volt lamps are now connected, and the standard of voltage of each of the dynamos, and consequently of the system as a whole, might be doubled, thus providing for four times the number of lamps now operated within a given area, or for greatly increased length of conductors without exceeding the present percentage of conductor drop

The practical importance, to the physician, of a correct conception of the operation of this law of the distribution of electrical potential along one or many parallel circuits, in proportion to the resistance encountered, receives clear illustration in the extreme case of applying currents fatal to human life in electrical executions I have witnessed two such applications, and as a result of the first one, I had the pleasure of participating in the discussion of the able paper read by Dr Carlos F MacDonald before the New York Academy of Medicine, March 16, 1892 In this paper Dr. MacDonald summarized the phenomena which he had observed at the first seven executions under the present New York law In response to his invitation, I analyzed the *electrical conditions which I observed at the death of* McElvaine, the Brooklyn murderer, for the purpose of pointing out the fact that a much greater electrical energy was applied than was apparently necessary to effect the result, because owing to the plan pursued in applying the electrodes, the greatest portion of the resistance encountered by the current was probably not in the vital organs, but in and near the surface contacts and the bony structure As a result of this assumption (and I think it is susceptible of proof) the greatest fall of potential and therefore the greatest expenditure of joules of energy must take place outside of the brain and other nerve centers, and must fail to have any appreciable effect upon them and upon the heart and lungs, where complete paralysis is in such a case desired

Perhaps I may be pardoned if because of my very limited opportunities for observing cases which seem to carry the most force to the physician's mind, I use this somewhat repugnant illustration, and reproduce a diagram made in connection with the discussion I have mentioned, and quote one or two of the points then emphasized

In opening the discussion, our esteemed Fellow, Dr W J Morton, remarked that it was not the mere voltage that must be relied upon to kill and it seemed to me then as it does now, that from this text a practical sermon might well be preached by some medical authority, applying the principle to the remedial uses of electrical energy in your everyday practice I may be able to so state the conditions that some one will thus draw the proper practical deductions

Perhaps a desirable form of expression is that the lethal or remedial effects which attend the flow of a given current, at a given density in any tissue, for a given time, are proportionate to the distribution of fall of potential or expenditure of the total applied voltage

I think I may say that the fact that alternating currents were used at the execution of McElvaine does not probably cause the problem to vary in any great degree from the conditions expressed in the diagram now before you In its details I have for simplicity assumed that no variation is met, and the force of the lesson we may draw is not lessened, though it may be found that new factors are introduced by the substitution of alternating currents of varying periods, for the direct distribution to which I am supposed to restrict myself

To apply a pressure of 1,000 volts, alternating from 200 to 300 times a second, and maintain that pressure for an appreciable time against the resistance of the human body, from the forehead to either leg below the knee, does not probably greatly increase that resistance at the instant of contact Or, if it has such an effect, the maintenance of the so-called current reduces the effective resistance so speedily that we get from 1,000 volts, an expenditure of energy at such a rate as snuffs out the life of the criminal more quickly than neural impression can be carried from the point of contact to the seat of sensation in the brain

The energy that kills is therefore (with a given frequency) the product of three factors 1, the electrical pressure or electro-motive force that is applied to the surfaces of the body, or, in more accurate technical language, the effective difference of potential (in volts) between the electrodes, shown by the Cardew voltmeter, 2, the rate of expenditure of this potential in each unit of resistance (or impedance) in the body, or the number of volts fall of potential to the ohm cases, such as those reported to the American Neurological Association in 1890 by Weir Mitchell, the morbid process may affect chiefly the cord, but such cases are rare

"It is furthermore possible that in the future we may differentiate several affections which are now called chorea Huntington's chorea and the electric chorea of Dubini are now fully recognized as distinct diseases, having no connection with the ordinary chorea of childhood—Sydenham's chorea Evidence is accumulating that in most cases of Sydenham's chorea we have to do with a disease of microbic origin, and the researches of Berkeley, Dana and Pianese have done much to confirm that belief Other cases, including some of the rather rare cases which are alleged to be due to fright or to irritation, may be of hysterical origin In chorea of microbic origin the toxin probably exerts its chief influence upon the brain cortex, especially in its motor region

"The hypothesis on which quinin is recommended for the treatment of chorea seems to me untenable, and the therapeutic results are based thus far on too few cases to warrant us in ascribing greater virtues to this drug than to arsenic Not having the idea at the time of publishing the results of this very imperfect trial of the drug, the results of one season's trial did not seem to me of sufficient value to lead me to try it in my private practice or in my subsequent terms of service at the hospital, and I went back to my former custom of supplementing the rest and regimen with full doses of arsenic, associated if necessary with iron or other tonics, and, in case of great motor disturbance and restlessness, with sulphonal or other sedatives"

OCULAR SYMPTOMS OF THE LITHEMIC STATE

Lithemia is not latent or suppressed gout, it is a modified form of gout It is the form which is particularly prone to manifest itself in this country, and has on this account been styled American gout by Da Costa[1], who by his writings has contributed largely to our knowledge of this peculiar morbid state The term, lithemia, is not entirely satisfactory, since the condition intended to be described involves much more than a mere excess of uric or lithic acid in the blood or urine The blood contains urates in excess and frequently oxalates, also other imperfectly elaborated products of waste, such as xanthin and paraxanthin, possibly it may yet be further poisoned, as suggested by the same authority, by the absorption of ptomaines, or toxalbumins, resulting from imperfect gastric and intestinal digestion The urine is, as a rule, increased in density and in its content of coloring matter, and is acid in reaction, but spontaneous deposits of urates and of uric acid are seldom observed, small quantities of albumin may sometimes be found and even tube casts, both hyalin and epithelial, but these are only transitory and do not indicate permanent kidney disease While a deposit of urates in the vicinity of the joints does not occur, and attacks of acute arthritis are rare, there is a painless enlargement of the phalangeal joints with some impairment of function, especially observed in elderly people The blood tension may be normal, or moderately increased in lithemia, but it is so to a less degree than in typical gout, and the arteries do not so readily tend to the atheromatous condition, neither do the heart or kidneys present the usual gouty changes There is no acute exacerbation of joint inflammation in lithemia, as there is in true gout, such attacks, according to Trousseau's teaching, being conservative and therapeutic efforts of nature to relieve the condition, but there are other disturbances which are not entitled to be considered so favorably

Among the usual symptoms have been enumerated, impaired digestion and a tendency to acid or fermentative dyspepsia, muscular pains, neuralgic attacks, pains in the tendons, malaise and indisposition to exertion, drowsiness during the day, lack of ambition, depression of spirits, frequent and severe attacks of vertigo and migraine, restlessness, insomnia and jerking muscles at night One consequence of defective oxidation and deficient elimination and of the excess of food supply, is that the functions of the liver are imperfectly performed and there is generally more or less hepatic disorder, with its attendant symptoms

The ocular affections associated with lithemia have quite recently been reviewed by S D Risley of Philadelphia, in a paper read at the State Medical Society of Pennsylvania Very much has been said and written, directing attention to eye abnormalities as the cause of irregularities of function in remote organs, producing symptoms which are liable to be mistaken for cerebral, gastric, hepatic, renal, spinal or nervous disease Even chorea and epilepsy have been traced to this cause and cases have been effectually relieved by appropriately selected glasses

It has also been shown *per contra* that general disorders having their principal lesions in the great nerve centers, like locomotor ataxia, or in the blood, as in syphilis and tuberculosis, or remote organs and tissues, as in Bright's disease of the kidneys, or in disordered metabolism, as in gout and rheumatism—may each give rise to characteristic changes in structure and disturbance in function of the organs of vision Directly in this connection, Risley calls attention to the fact that lithemia is both a primary and a modifying factor in many ocular discomforts and even the efficient cause of many serious diseases of the eye The great liability of gouty subjects to transient vasomotor derangements, to persistent and recurrent inflammations of mucous membranes and fibrous tissues, and to degenerative changes in vascular walls is generally recognized, and in its modified form, as lithemia, something of the same character might be looked for in an organ like the eye, in which these structures are represented in such a highly organized form the skin in different individuals, and the difficulty in so adjusting the electrodes as to have identical conditions He had concluded that the only accurate method would be to introduce the electrode beneath the skin Another difficulty which he had met with was the fact that the skin itself presented such a large proportion of the resistance of the entire body that there would be but a very small margin for investigation as to the variations in the different bodies He would like to have the reader of the paper propose some way of overcoming these difficulties

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[1] The Pathology of Lithemia, Medical News, March 17, 1895

Mr Jenks said that his knowledge did not extend beyond the suggestion, in fact this suggestion had been made to him by Mr Kennelly He was not aware that any experiments had been made which would throw any further light on this subject

Dr Morton said he did not wish such a valuable paper to pass by without saying something in recognition to the author He did not feel competent in any sense to discuss those intricate electrical problems from the standpoint taken by the author, but there were certain questions which suggested themselves to the minds of physicians He had been especially interested in the statement that physicians were applying a certain amount of *energy* to the living organism—energy against energy He was also pleased in the reduction of the expression energy, to terms which we could all understand If the physician used the Franklinic current his mind was occupied with electro motive force, if he used the constant current then current strength was prominent in his mind, etc We first thought a great step had been made when the milliampère meter was introduced, but we now know that we should take into consideration also the question of voltage

It was true that we might express electrocutions in terms of horse-power, and speak of them as two, three or four horse-power deaths, the author said we must go still further and take in the elements of time and express the effect of the current in joules This would mean that we must go still further in our practical work and express it also in joules

This subject of electrocution was a grewsome one, and in his opinion we, as electro therapeutists and physicians had nothing whatever to do with it We should relieve and cure people and not deliberately take any part in causing the death of any human being So far, he had always refused to witness these executions although he had been invited to do so He believed with Monsieur D'Arsonval, who put forth that startling theory that these criminals were not really killed by electricity He thought it was even now a question of the old Scotch verdict, "not proven " This being the case, the person performing the autopsy was responsible for the death of the criminal, so the responsibility was again turned upon the medical profession where it did not belong In order to prove that the death was due to electricity, we should wait for decomposition to occur, and not perform an autopsy within a few minutes after the application of the current

In conclusion, the speaker said he welcomed such a paper, and particularly the subject of measurement reduced at last to one of energy instead of voltage and current strength

Dr Dickson said he agreed with the last speaker that when we stopped at using the milliampère meter we had not done all we should do

(*To be continued*)

Louisville Academy of Medicine

Regular meeting was held March 18, 1895

Dr I N Bloom was the first speaker, and said I wish to show this negro woman, about 40 years of age, whom I saw for the first time on February 22, having been sent by Dr Satterwhite At that time she exhibited an eroding ulcer, about the size of a penny piece, involving the left ala of the nose, on its outer margin While I was in some doubt as to the diagnosis, between epithelioma and lues, I noticed her fingers which present the characteristic signs of hereditary syphilitic dactylitis The woman, however, says that her fingers have only become so in the last two or three years She was married about twenty years ago, but has been separated from her husband a number of years In addition she complained, when she first came under my observation, of severe headaches, not to be located in any one part more severe at night Under the mixed treatment these have almost disappeared, and as you can see the ulcer upon the nose is almost entirely healed I show this case chiefly on account of the dactylitis These cases are seen with extreme rarity I was in the hospital in Vienna for years, as Hospitant, and saw very few cases In out-patient, hospital and private patients, I do not think I have seen more than twelve cases The text-books would lead us to believe that they are common I have not seen them, and would like to ask if any of the Fellows have seen a similar case I see typical cases of syphilitic manifestations repeatedly This case presents no other features of interest

Dr T C Evans—I happened to be present in Dr Bloom's office when this patient came in, and noticed the dactylitis It has the appearance of that seen in congenital syphilis I have seen five or six cases in children with hereditary syphilis, but this is the first case I have seen of acquired syphilis with dactylitis

Dr Ap Morgan Vance—It perhaps happens that the general surgeon sees a good many more of these cases than the specialist, he being consulted for some "bone trouble " I have seen considerably more than a dozen cases, I think, in my fifteen years' experience

Dr W C Dugan—I wish to show a specimen removed from a case operated on yesterday It is the omentum and sac removed from a femoral hernia There is one point I want to bring out in reporting the case Day before yesterday at 2 o'clock, she complained of pain in the femoral region, her family physician was called in and diagnosed femoral hernia He used taxis for a few minutes as did the patient also without success I was sent for and found a large tumor in the groin, no pulsation or coughing no tympany Pulse 80, and good No perspiration The patient was inclined to joke, in fact, all the symptoms showed there was no great impression of the nervous system I looked on the case rather as an omental hernia than an intestinal, and was inclined to let it go until morning, but fearing there might be a small piece of gut, I operated that night Dr Evans administered the anesthetic An incision was made through the abdominal wall, not cutting in through Gimbernat's ligament as usually advised, but Poupart's ligament, cutting through the sac, and made a radical cure Here was a case with a pulse under 80, no constitutional distress, had vomited only a few times, yet the gut was almost gangrenous This shows that we can not tell what we are to find If I had let her go until morning, gangrene would have occurred She is doing well now and will soon be up

Dr Vance—I think Dr Dugan was right in not letting an incarcerated hernia go from night until morning It is right to give the patient the benefit of the doubt

The paper of the evening was read by **Dr John F Barbour** Subject,

THE PRESENT STATUS OF LINEAR CRANIECTOMY

The author stated that the first case operated upon was by Dr Fuller of Montreal, in 1878, for idiocy, and that the operation was not done again until 1890, when Lannelongue performed it The latter's statistics were quoted These were written four years ago, but since he has been silent All reports lack as to the state of the patient before operation Its object is to give full scope to the brain by lessening resistance, there being premature ossification The following pathologic conditions were mentioned as causing idiocy

1 Microcephalus
2 Hydrocephalus
3 Arrested development of the convolutions
4 Poroncephaly from congenital malformations
5 Pseudocysts from pathologic malformations
6 Hypertrophic sclerosis
7 Atrophic sclerosis
8 Tumors of the brain
9 Meningitis chronic meningo-encephalitis
10 From pachydermatous or myxœdematous cachexia due to absence of thyroid gland

Eighty-nine operations were tabulated There were sixteen deaths, the results were practically *nil*, in twenty cases, of the remaining fifty-three, four recovered from the operation, one had epileptiform attacks less frequently, and in forty-eight there was improvement but the details were meager and unsatisfactory There is hardly an operator who has submitted a later report The history of the case reported, which occurred in the writer's practice, was as follows

There was no history of syphilis, idiocy or insanity in the family At four months the anterior fontanelle closed, and the symptoms dated from this time There was no sphincteric control, the child could not sit alone erect, it had a pained expression, low whimpering, epileptiform seizures as many as twenty-four times in a day She was extremely restless, recognizing only her milk bottle The operations were done by Dr Vance—linear craniectomy April 6 and where another might suspect deceit The possible gross injustice that may thus be done, in individual cases, will be obvious to any one

The fact is, handwriting is an artificial accomplishment and is affected by so many factors that a perfectly natural and characteristic one is probably more of a rarity than many would suspect As an indication of character it is a dangerous guide and ought, at best, to be only used by especially skilled observers, who themselves should draw their own conclusions with reserve, and ought to hesitate before laying down formal directions for the guidance of others

For medical purposes the study has a value, but more from a pathologic than a psychologic point of view, and the recommendation of its use should be limited to the study of its disorders in disease The germ of truth that exists in the popular graphology of the day, is not enough to give the latter the rank of an accepted science, even with the support of high authorities like Preyer and others

A RIVAL TO PERKINSISM

" No wretch e'er felt the halter draw
With good opinion of the law "

The State of " Missouri has a Still," says the *Medical Fortnightly*, " that never rests " It is Dr Still, the so-called " Osteopath "

One of the down-trodden worms of this Still—James Strothers—is located at Roseville, near Monmouth, Illinois He issued a circular in the *Roseville Times*, May 3, 1895, in which he made the usual tirade of irregulars and miscellaneous rascals, generally, against the Practice of Medicine Act of Illinois, and the State Board of Health, on account of his arrest by that Board This circular which sets forth the grievance of the "Osteopaths" was reprinted from the *Roseville Times* and distributed to the members of the Illinois Legislature May 28, Mr Hamer introduced into the State Senate the following

A BILL

For an Act to amend Section ten (10) of an Act entitled, " An Act to regulate the practice of medicine in the State of Illinois," approved June 16, 1887, in force July 1, 1887

Section 1 —*Be it enacted by the People of the State of Illinois, represented in the General Assembly*, That section ten (10) of an Act entitled, " An Act to regulate the practice of medicine in the State of Illinois," approved June 16, 1887, in force July 1, 1887, be amended to read as follows

Sec 10 —Any person shall be regarded as practicing medicine, within the meaning of this Act, who shall treat, operate on, or prescribe for any physical ailment of another

But nothing in this Act shall be construed to prohibit services in case of emergency or the domestic administration of family remedies, or the practice of " Osteopathy " or to commissioned surgeons of the United States Army, Navy or Marine-Hospitals service in the discharge of their official duties

The first three lines attracted no attention on the part of any reader and the affair was managed very quietly and actually passed the Senate, and but for the watchfulness of the Committee on Legislation of the Illinois State Medical Society, and Dr John L White, of the House, would have passed both house without attracting any particular attention

It seems that the original Osteopath, " Dr " Stil has a "college," the "American School of Osteopathy located at Kirksville, Mo , from which emanate suc hopeful worthies as Strothers

Dr Steele, of St Louis, who investigated th matter, read a paper on the subject before the Mi souri State Medical Society, of which the *Fortnight* gives an abstract

"The question is now often asked, What is oste pathy? It may be said to be a 'school of medicin of which one Still, of Kirksville, is the discipl which has developed to such an extent as to have 'college' from which numerous 'graduates' are b ing sent out, which has had a trial for a law recognition, which bill passed both houses of t recent Legislature, and would have gone upon t statute books had it not been wisely vetoed by Go ernor Stone All thanks to him for having sav the State from disgrace! The 'graduates' of th 'school' do not *need any special training in ana* omy, physiology or therapeutics, as the whole syste is summed up in one proposition all diseases a due to the displacement of bones and conseque pressure on nerves and other tissues The summa of treatment is simplicity itself reduction cure There are two kinds of disease 1 one from di placed bones of the extremities, causing deformiti pain, etc , 2, the other, dislocation of some of t vertebræ, giving rise to trunkal diseases But t same treatment cures all The stock of knowledg therefore consists in the knack of manipulation, wi perhaps an element of hypnotism—certainly a lar amount of suggestion In this, very like Christi science, certainly many cures are effected, the class *benefited being four* 1, *old adhesions followi* sprains, rheumatism, etc , which can be broken u 2, cases where there is really no pain or tenderness a joint but the patient has lost its use through fea 3, *hysterical* cases, 4, *old dislocations, real* T regular profession has been derelict in not recogni ing and curing such cases "

Osteopathy as it is practiced, thus appears to be ma sage, pure and simple, and Dr Steele has not qui done justice to modern teaching, which recogniz fully the indications for massage and the corre methods of its application The masseur has con to stay, but we do not like to see him masquera ing under the name, osteopath A masseur of t first order must thoroughly understand the anato of the body Now-a days when the masseur is as i dispensable to the general practitioner and the su geon, as the trained nurse, he is so much in dema that no excuse can be offered for his adherence theories such as are propagated by this veri moonshiner of all the illicit stills in the countr Let the masseur stick to his art

RAILWAY ACCIDENTS AND MORTALITY

From advance sheets of the "Abstract of Statist of the Railways of the United States" for the ye ended June 30, 1894, we learn that, " during the ye

SELECTIONS

Cow's Milk, its Sterilization and the Nourishment of Children — The article under this heading in the *Berliner klin Wochenschrift* by Biedert is chiefly polemical and directed against Heubner It contains no new facts of importance, but its essential drift is to show that in the depreciation of the fitness of milk as food for children, the chemic composition of the same from the bacteriologic standpoint must be regarded of prime importance The superiority of mother's milk to cow's milk in this connection must never be forgotten In conclusion, the writer calls special attention to the advantages of his cream mixture and its increasing recognition —*Centralblatt für innere Medicin*

Two Cases of La Grippe of Pseudo-phthisical Form —(Chatin and Collet in *Lyon Med*, 1894, No 41) These writers observed two cases of influenza with pulmonary complications which they were forced to regard as phthisis from the physical examination There existed dullness on percussion over the apices, sonorous râles, cavernous respiratory murmur, copious, purulent, nummular sputa In one case the diagnosis of phthisis was given up, because there was no fever and no loss of weight and especially because no tubercle bacilli were found in the sputum The other case proved fatal, and the autopsy showed edema of the lungs, splenization at the apices, no sign of tuberculosis, no broncho-pneumonia, no caseous foci Similar observations have been made previously —*Centralblatt für innere Medicin*

The Influence of Erysipelas on the Course and Termination of Asiatic Cholera —N Blagowjeschtschenski (*Medicinskoje Obosrenje*, 1854, No 15), during the cholera epidemic superintended the bacteriologico clinical station opened in Merv (in the trans-Caspian province), and observed here, among 300 cases of cholera in hospital, with a mortality of 52 per cent, the coincidence of this disease with erysipelas four times In these cases, in all of which the diagnosis was confirmed bacteriologically, the erysipelas was first manifested during the algid stage on the third or fourth day of the disease In every case the appearance of the eruption influenced favorably the course of the cholera The low temperature yielded at once to the high temperature curve of erysipelas Diarrhea and cramps ceased immediately and the general condition of the patient became markedly improved within twenty-four hours The languor disappeared, urine was excreted, appetite and sleep returned The course of the erysipelas was also relatively light and the eruption not extensive In conclusion, he writes "If one can assume that, under the influence of the toxin producing cholera, the heat center in the organism is paralyzed, in the same way it can be accepted that this center under the influence of the erysipelas toxin regains its irritability"—*Centralblatt für innere Medicin*

Retention of Water in Fever —Contribution to the Question of the Importance of Ingestion of Water and Increase of Elimination in Infectious Diseases —(Julius Glax at the celebration on the completion of the thirtieth year of the Professorship of A Rollett) The writer formulates an opinion, based on fifty-three cases of typhus (abdominalis) on the question often answered contradictorily, whether the human body retains water in the tissues during fever, or on the contrary is deficient in water The urine was collected and no case included in which diarrhea was too free Treatment, cool bathing and galvanization at the neck Amount of water ingested was noted He concludes that there is a conservation of the water supply during fever, and in convalescence an increased elimination, frequently coincident with the decline of temperature and at times an indicator of speedy complete defervescence On the other hand after the initial chill and subsequent rise of temperature, the elimination is usually increased for a short time The explanation is that at the onset of fever, while the blood pressure is yet high, the diuresis occurs, but a diminution ensues as the pressure becomes lower and a still later increase as strength returns If strength is not much impaired, the elimination is only correspondingly decreased An increase in ingestion of fluids increases the elimination in most cases only after defervescence has begun, while during the height of the fever, diuresis appears to be more favorable, the more limited the ingestion The recommendation of Cantani and Sahli, that infectious diseases be treated by increased supply of fluids to cleanse the tissues is combated at some length as founded on false premises In conclusion, the assertions of the writer are easily reconciled with the fact that by drinking cold water in health the temperature and pulse are lowered, and diuresis occurs, for this happens only when the heart and blood pressure are normal —*Centralblatt fur innere Medicin*

Influenza and Accompanying Pneumonia During the Last Epidemic, 1893–94 —Gineiner (*Prager med Wochenschrift*) had the opportunity to observe 403 cases of influenza in Donawitz by Leoben between Dec 10, 1893, and March 11, 1894, 6 9 per cent of all the inhabitants were attacked, three times as many adults as children, and three times as many men as women, 27 per cent of the cases occurred between the ages of 30 and 40, and no child under 1 year was included The largest number lived on the ground floor (50 1 per cent), while the third story held the fewest (5 5 per cent) The most commonly observed group of symptoms was sudden chill or chilliness with a temperature of 39 to 40 degrees C , aching, feeling as if one had been beaten heaviness of the head, anorexia and constipation These symptoms lasted on an average two or three days It was never possible to recognize signs in the lungs in the first days, these, beginning later, belong rather to the complications The nervous system was very seldom affected, but neuralgia was often seen as a sequela Protracted dyspepsia was a frequent complication and quite often enlargement of the spleen Acute nephritis in 1 per cent of cases Ninety cases of influenza, also 22 3 per cent of all forms of sickness, were complicated with pneumonia, and of these 64 4 per cent were in men, 14 4 per cent in women, and 21 2 per cent in children (none below 10 years of age) Almost all the children were attacked with pneumonia as a complication, but those patients between 30 and 40 years of age were best able to withstand the severe attacks The greatest percentage of cases complicated by pneumonia (56 6 per cent) and also the greatest mortality (27 4 per cent) occurred among those living on the ground floor The influenza pneumonia was distinguished from croupous pneumonia by the heavy sweats which were present from the onset but which did not influence the temperature The type of fever was also different The decline was more commonly by lysis than by crisis Meningitis complicated ten pneumonias (11 per cent) on the fifth to the eighth day, always with fatal termination, while Jürgensen states 5 per cent as the ratio of meningitis in croupous pneumonia While in croupous pneumonia generally after complete consolidation the condition remains stationary until the temperature falls, in influenza pneumonia the condition was always changing, one area beginning to clear while another previously free, suddenly became infiltrated The sputum was generally rusty The mortality in influenza pneumonia amounted to 27 per cent, and was largest among the elderly patients, no child died It is interesting to note that during the influenza epidemic, no other infectious diseases prevailed except a few cases of typhus (abdominalis) Sickness increased with the lowering of air pressure and temperature, cloudy weather increased the disposition, but no influence could be ascribed to a precipitation of moisture The direction of the wind, on the other hand, seemed not without influence, for in a valley lying south of Donawitz, which had hitherto been exempt, suddenly in the early part of February the residents of various houses were attacked, and records show that from the end of January the wind was constantly from the north Surely the wind bore onward the specific cause, since a direct transfer by means of the existing active intercourse would have been accomplished much earlier

The greater disposition to the sickness among those living on the ground floor, which is also the case, according to Buchmüller, in croupous pneumonia, and also the firm hold of influenza on certain houses, led the writer to the conclusion that the cause is developed in the earth, and thence reaches the dwellings Since he was never able to find a direct transfer from person to person, he regards influenza as a miasmatic infectious disease The chief complication, pneumonia, might also be induced by the same influence —*Centralblatt für innere Medicin* shops and lighter trades, that every encouragement should be given to dependent young women to engage in such pursuits

The usefulness of this book is most apparent to those engaged in the work of public charities and corrections, and the civic legislator may here find many precedents to guide him in his search for a remedy for the present rather depressing state of things as shown by municipal statistics

Atlas of Clinical Medicine By Byron Bramwell, M D, Assistant Physician to the Edinburgh Royal Infirmary Vol iii, Part 2 Edinburgh F and A Constable, University Press 1895

The second part of the third volume of this excellent work in clinical medicine has just appeared Like its predecessors, it is a very interesting number, dealing with congenital syphilis, progressive muscular atrophy, the progressive muscular dystrophies, points to be observed in the clinical examination of cases of pseudo-hypertrophic paralysis and other forms of progressive muscular dystrophy, and notes of cases of pseudo-hypertrophic paralysis and other forms of progressive muscular dystrophy

There are ten plates, with numerous illustrations of the text Two of ichthyosis, one of multiple cancer of the breasts and other organs, four of congenital syphilis, two of progressive muscular atrophy, and one of cyanosis In addition, there are numerous illustrations scattered through the text

It is one of the best numbers issued in this useful work

PUBLIC HEALTH

Leprosy in Norway —According to the most recent statistics, furnished by Dr E Kaurin of Molde, leprosy is disappearing more and more in Norway In 1856 there were about three thousand lepers in that country, at the end of 1892, there were not over eight hundred or nine hundred, half of whom were inmates of the leper asylums Since then the number has so much decreased that it is proposed very soon to close two of the five asylums in the country The author's opinion is that leprosy is an exclusively contagious affection and that heredity is not to be regarded as a predisposing cause Strict segregation of lepers is he believes, absolutely necessary in order to stamp out disease [1]

Prophylaxis of Paludism —Noel, after passing in review the successes and failures of quinin and certain of its salts in the prophylactic treatment of malaria, reaches the following conclusions 1, the prophylaxis of paludism by quinin is a demonstrated fact; 2 there are no inconveniences attending the treatment in health, and quinin loses none of its efficacious properties in cases of intermittents, 3, the hydrochlorate of quinin is the best salt to use, 4, the drug should be taken each morning after arrival in the dangerous zone and during its passage, 5, the minimum daily dose is 0 30 grams For troops on the march the pill form is preferable, but for those in camp it is better to use the medicament form an ingredient of a tonic Notwithstanding the efficacy of quinin, in the light of recent knowledge that malaria is waterborne, the true prophylactic is pure water [2]

Cholera and Life Insurance —Dr Oertel, the German bacteriologist, who died in Hamburg in September, 1894, from "laboratory cholera" had his life insured in favor of his mother It will be remembered that the Doctor contracted the disease in the course of his experiments, but it was never possible to exactly determine the manner of infection either before or after death The policy read that the amount was to be payable in case of "violent and sudden accident, independent of the will of the assured, and determined by a external mechanical cause" After the Doctor's death tl company refused to pay the policy and the matter was r ferred to the Hamburg Court of Appeals, which has decide that "the multiplication of the bacilli and the effects whi these produce on the stomach and intestines are to be r garded as a chemical and not a 'mechanical' action" [1]

Vaccinal Dermatoses —The dermatoses of vaccinia, no ma ter what their morphologic differences—erythematous, pa ular, vesicular, pemphigoid—agree in appearing from tl ninth to the eleventh day, according to Hervieux, or on tl eighth day according to Dauchey In certain cases tl eruption may appear earlier or, on the contrary, it may l later The eruption appears without any modification temperature, it is ephemeral, never contagious and rare itches These vaccinal eruptions are rare, they are near always observed in children, exceptionally in adults, ai are more frequent in summer than in cold weather He vieux thinks they are due to the virus, and Behrend a cribes them to individual idiosyncrasy While this questi is still disputed, the influence of individual predisposition undeniable The pathogeny of these dermatoses is not y well established Some authors, as Morris, attribute them reflex nervous action, others, as Behrend, claim they ari from the passage into blood, either of the vaccine virus self, or from pus microbes from the pustules or their solub products The most frequent eruptions are a rash, of whi Conget distinguishes four varieties—erythematous, morbi form, papular and nettle-rash Vaccinal malaria is equal frequent Pemphigus is rare as is also purpura It is i teresting to note that while some skin lesions, like eczen and psoriasis, are favored by the development of vaccin the latter does not produce them but only encourages the development [3]

A State Vaccine Farm —The Illinois Legislature at its la session passed the following

An Act to establish a Vaccine Laboratory and making appropriation therefor

Section 1 —*Be it enacted by the People of the State of Illino represented in the General Assembly*, That the sum of thr thousand ($3,000) dollars be hereby appropriated, out funds not otherwise appropriated, for the purpose of esta lishing, equipping and maintaining a laboratory in conne tion with the State University at Champaign, for the prop gation of pure vaccine virus

Sec 2 —That the Trustees of said University shall ha the management of said institution, *Provided, however*, th the State Board of Health shall exercise supervision of t methods of propagation and shall certify to the purity of products

Sec 3 —That the product of the vaccine laboratory sh be furnished all physicians and Health Officers, within t State at the cost of propagation

Sec 4 —That a report of the management, together wi a statement of the receipts and disbursements, be made a included in the annual report

The passage of this Act is one of the measures which tl Legislative Committee of the Illinois State Medical Socie advocated and pushed The State Board of Health al commended the bill, but the active efforts of Drs John White, of the Legislature, Graham of Chicago, and Maxwe of Mt Carmel, alone secured its passage

Health Reports —The following health reports have bee received by the Supervising Surgeon-General M-H S

SMALLPOX—UNITED STATES

Arizona Nogales, June 17, 4 cases, 1 death
Michigan Detroit and Olivet, smallpox reported prese June 8 to 15
Missouri St Louis, June 8 to 15, 3 cases, 1 death
Tennessee Memphis, June 8 to 15, 2 cases

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[1] Le Semaine Medicale June 5, 1895
[2] Le Bulletin Medical, No 29, 1895

[1] Le Semaine Medicale June 5, 1895
[2] Patovi in Presse Medicale de Leige, No 15, 1895

Scotch villages where the residents are, we may say, acclimated and have become hereditary attendants to the insane this danger is perhaps at a minimum, but the scattering of the chronic insane throughout a farming section, for example, with the freedom and daily contact with individuals of all ages, susceptibilities and predispositions, has a very objectionable aspect in this special regard. There is a certain element of risk in it, not only to the intellects but also to the morals of those who from age or otherwise are in any way impressionable in these respects, and even the best selection of subjects can not altogether guard against this danger. It may not be a very apparent objection to the system, but it is a real one that ought not to be left altogether unconsidered.

Thus far the boarding out plan has been experimented with only to a very slight extent in this country, and in only one State, Massachusetts. It is, however, one of the plans frequently and ardently advocated, and will probably before long come to the fore in some form or other, in many other sections. It falls in with the sentimental tendency to demanding all possible freedom and lack of restraint for the insane, which seems to be growing rather than decreasing, but which has its bad as well as its good side, and should be tempered by good judgment with careful appreciation of all the actual conditions. It is safe to say that if adopted anywhere, it should only be considered as an experiment and an enforced alternative, not as really an improvement over other methods of public care. We certainly can not, in the existing state of affairs in many portions of the country, immediately expect any such success as has been attained in Scotland, where the best we can say is that the disadvantages are reduced probably to a minimum. Well managed county almshouses such as are found in different parts of the country,—the so-called county asylums of Wisconsin, for example, with all their disadvantages, and they are often very serious ones, are, on the whole, probably a better method of caring for the overflow of the insane from the asylums in this country than would be the plan here discussed. At least this will be true until we can have systems of State care for all the insane, with supervision as competent and thorough and independent of political changes and control as that of Scotland.

"PRINT THE FORMULA ON THE LABEL"

The *New York Ledger* has had the name of being a safe family newspaper, and not a few medical men throughout the country have been among its regular patrons. In view of this fact it should be noted that that paper has, in its editorial columns, come out boldly in the defense of quack remedies, and has already opened its columns to the manufacturers of sarsaparillas, etc. The editor takes for his text the fact that that grand old State, Alabama, has before its Legislature a bill that requires that no patent or proprietary medicine shall be sold unless the formula of the compound shall be printed on the label of the package containing the article.

The editor finds cause for blame against the conservative and preservative legislators of Alabama on the score that such bills are the outcome of the trades-unionism and selfishness of the medical profession. He alleges, while he can not prove, that the free use of quack medicines make a saving in the doctors' bills, giving little heed to the well known fact that much of the money spent for patent compounds is money spent in the behalf of a speedier call for the physician or the undertaker than if the compounds were left alone. The editor unadvisedly maintains that quack remedies do enable our fellow-citizens to dispense with the services of the regular practitioner, and that this is the real incentive to legislation of that restrictive character that has been found most salutary in certain foreign communities.

The fact remains that the course taken by our Alabama fraternity is probably the one that cuts most deeply into the patent medicine business, therefore, let us urge on every suitable occasion that the manufacturers of these more or less dangerous articles be forced to *print the formula on the label.*

The following are two of the closing paragraphs in the *Ledger* editorial named above, going to show, first, that the quack medicine is convenient and therefore worthy of financial recompense, and second, that a little knowledge of medicine is not a dangerous thing. Nothing in the way of refutation of these arguments needs to be adduced before the readers of this JOURNAL, but we believe it to be well for our readers to know a little of the kinds of defenses that are being constructed for dangerous quack preparations.

> "The firm that put on the market the gimlet-pointed screw and amassed a fortune by the means of it had, by reason of the low price and convenient shape in which this article was furnished, a claim on the public for suitable recompense for their efforts. Just so the individual who prepares and offers for sale in convenient form some simple medicine has every right to the monetary return that an excellent article is sure to bring.
>
> "It is the sheerest nonsense to suppose that medical men can form a close corporation and absolutely control the dispensing of medicines. The world is full of people who have most excellent sense about the use of remedies, and are quite as capable of prescribing them as the ordinary doctor. Of course, this cuts into the business of the physician in a very emphatic fashion, and this fact, and not the affectionate solicitude of legislators, is the motive that underlies the introduction of bills of the sort described."

The Forty-sixth Annual Session of the AMERICAN MEDICAL *ASSOCIATION will be held in Baltimore, Md. on Tuesday*, Wednesday, Thursday and Friday, May 7, 8, 9 and 10, commencing on Tuesday, at 10 A.M.

kidneys the glomerular vessels contain the largest numbers of bacilli So after the injection of pyocyaneus cultures, bacilli were abundant in the glomeruli and mostly disposed along the walls, here also a part only lay in within the leucocytes Of these lying extracellular many were adherent to leucocytes or red blood corpuscles Bacilli were few in numbers in the liver and spleen, also in the remaining vessels of the kidneys —*Centralblatt für Physiologie*, June 1, 1895

MISCELLANY

Dr John V Shoemaker of Philadelphia, has had the degree of LL D conferred upon him by Dickinson College of Carlisle, Pa Dr Shoemaker was graduated at Dickinson College in 1872, and is now Professor of Dermatology in the Medico-Chirurgical College of Philadelphia

Nathaniel Hawthorne on "the Bible Oath"—The *Independent* thus refers to the unsanitary "kissing the book " "Any one who has acted as a witness in court and kissed the court Bible in taking the oath should understand the sanitary reasonableness of Pennsylvania's new law to dispense with the kissing Nathaniel Hawthorne described the Bible he used for administering oaths to American waifs and strays who came to his consulate in Great Britain as 'greasy with perjuries'"

Creosol —Ballaud and Dubois have given the name creosol, to a combination of tannin and creosote, containing 60 per cent of creosote and 40 per cent of tannin It is a deep brown-colored powder, very hygroscopic, completely soluble in water, alcohol, glycerin and acetone, insoluble in ether, and its reaction is neutral In concentrated solution, its taste is astringent, but without any caustic effects This medicament may be used in inflammatory affections of the laryngeal, tracheal and bronchial mucous membrane In adults the average dose is 5 grams daily, in children 0 gr 25, for the latter it may be prescribed as many times daily as the child is years old [1]

The Orbital Arches and Frontal Sinuses in the Insane —In a study of the crania of the insane, Giannelli points out that 1, the most projecting arches are found in men, 2, in male crania a marked projection of the arch is more frequent than a large sinus, 3, in the crania of men we find, in order of frequency, a deep sinus and a very projecting arch, a projecting arch and a very deep sinus, lastly, a normal arch and a small sinus, 4, in the crania of women normal arches and small sinuses are much more common, next comes the deep sinuses and projecting arches, while very deep sinuses are rare and markedly projecting arches are not seen The differences between the percentages of the sexes are rather accentuated, hence this should be borne in mind in the comparative study of skulls of the normal, the delinquent and the insane [2]

A Fortune Given to Charities—Mrs Mary B Turner, widow of Royal W Turner of Dedham, Mass, recently devised in her will among others the following public bequests Home for Aged Men, Boston, $2,000, Home for Aged Women, Boston, $2,000, New England Hospital for Women and Children, Boston, $5,000, Massachusetts Charitable Eye and Ear Infirmary, Boston, $2,000, Massachusetts General Hospital, Boston, to be used in providing free beds, $5,000, the Bethesda Society, Boston, $2,000 All the residue of her estate, after paying these and certain private bequests, goes in equal shares to the Massachusetts General Hospital, the Home for Aged Couples, the Home for Aged Men, the Home for Aged Women, and the Kindergarten for the Blind The testatrix provides that if any legatee makes a contest of any of the provisions of the will, he shall forfeit his bequest

Rare Eruption Caused by Antipyrin —A man of 80, with slight glycosuria and albuminuria and a small degree of psoriasis, after ingestion of a gram of antipyrin, had an eruption appear This began almost immediately (in about five minutes) after administering the drug The patient was seized with pricking sensations at first, then pruritus with flushed face, elevated pulse and appearance of red spots on the neck and then on the back The next day the eruption consisted of about one hundred bright red spots, disseminated without order, averaging in size that of a half dollar, slightly elevated and when seized between the fingers giving the impression of rather deep inflammation of the dermis Their evolution was rapid, and in a fortnight all had disappeared save for some plaques presenting an epidermic softening in the center (aborted bullæ) which lasted some time longer It is interesting to note that this patient had had exactly the same series of phenomena some years before, resulting from ingestion of quinin [1]

Relations between Delirium and Intelligence —Eirondon maintains that the delirant power of the insane is in direct relation to their intellectual capacity In order to have delirium with great and numerous ideas they must have a sufficiently well-organized substratum of intellect The lesser varieties of intellects have delusions and delirious manifestations of an elementary and uncomplicated character, formed from a few ideas and always expressed in the same monotonous fashion On the contrary, the power of the superior psychical activity in certain intelligent insane enables them to bring calumnious accusations attested by a multitude of circumstantial details, the apparent correctness of which may lead to an error of justice The diminution of psychical activity causes a closer union between the idea and the act, and a tendency to react from delirious conceptions by violent impulsive acts In all cases it will be possible and useful for the alienist to seek for the intellectual substratum of the delirious person in order to better appreciate the dangers and the possibility of cure [2]

Anaglyphs —The London *Lancet* states that several remarkable pictures, to which the above name has been attached, have been submitted to its editor, and are commented upon by him as indicating a new departure in the physiology of illustration The word "anaglyph" is not a new one, but it is new to the subject to which it is now applied

"They are printed in two colors, red and blue, the two images of the same object overlapping each other laterally to about three sixteenths or one quarter of an inch, and vertically either to about one sixteenth of an inch, or scarcely perceptibly The pictures are looked at through a binocular eyeglass, one of the glasses being red, the other of a peculiar deep violet blue or blue purple The overlapping of the images gives to the pictures when examined with the naked eye, a confused, blotchy appearance, but when looked at through the glasses the blotchiness disappears, and instead, with a clear outline, the most perfect stereoscopic effect is produced The reason of this appears to be that the prevailing tone of the pictures is red, while the chief outlines are strongly defined in white These are seen through the red glass The blue outline is much fainter, and hence, although it ought to be seen through the blue glass, becomes imperceptible, owing to the deep tone of this glass Only the stronger white and dark outlines can be easily seen through the blue glass The main outlines, as well as the details, are seen essentially through the red glass, but by skillfully shading the red lines with blue an effect of distance is secured, and the stereoscopic effect is thus in part produced "

Dr Henry M Scudder, better known as a clergyman than as a medical man was, nevertheless, an M D of the New York University Medical College, the degree having been granted in 1853 The following is a moderate tribute to his worth found in the *Independent*

"The life of Dr Henry Martin Scudder has been well by demonstrations that oblique astigmatism does not cause obliquity of the retinal images" Since Dr Savage did not know anything about my arguments it is not surprising that his criticism is so little to the point and consists simply in "threshing over old straw"'

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[1] Rev Int Med et Chir Prat, No 9 1895

[2] Rev Int de Med et Chir Prat, No 9, 1895

[1] Rev Int de Med et Chir Prat No 9, 1895

[2] These de Lyon, 1895

The object of my remarks was to demonstrate the fallacy of the proposition that in oblique astigmatism the retinal images of horizontal or vertical objects are not themselves horizontal or vertical, or in other words, as Dr Savage formulated it in his paper on the harmonious symmetrical action of the oblique muscles, that the image of a horizontal arrow can not be in the horizontal meridian of the retina, but is made slanting by the prismatic action of the astigmatic cornea" This obliquity by a prismatic action of the astigmatic cornea was *assumed* also (but not *demonstrated* as Dr Savage erroneously stated) by Dr Lippincott to explain certain phenomena of distortion of images in astigmatic eyes Now I have shown and I believe convinced by my demonstrations all the members present at that meeting, that the image of a horizontal (or vertical) line thrown upon a screen through a sphero cylinder lens equivalent to an astigmatic cornea does not suffer any such prismatic deflection As a full account of my arguments will appear in the April number of the *Annals of Ophthalmology and Otology* it is not necessary to argue this point here any further It is sufficient to repeat what I have already once stated, viz, that inasmuch as Dr Savage was not conversant with the nature of my arguments, he could not intelligently and successfully attack them

In conclusion, I wish to call attention to the fact that in this letter Dr Savage has used the words *obliquity* and *distortion* of the retinal images as if they were interchangeable terms But they are not synonymous, they apply to radically different conditions, for the retinal image may well be distorted without necessarily being oblique The image of a luminous point, for instance, is distorted by an astigmatic cornea into an oblong figure, because the rays passing through the astigmatic meridian are not brought to a focus in the retina The elongation, therefore, always corresponds with the direction of the astigmatic meridian, if the latter is horizontal (or vertical) the oblong image will be horizontal (or vertical) and if the meridian is oblique the elongation will be in an oblique direction, but it is evident that this obliquity of the image is caused by imperfect focalization and must not be confounded with the obliquity caused by the prismatic deflection *assumed* by Drs Savage, Lippincott and others While I deny the existence of the latter *obliquity*, I am the last person to deny the *distortion* of the retinal images, for I regard the distortion of the image of a light point as the most valuable sign for detecting astigmatism, and have for many years made the best practical use of it in my astigmometer F C HOTZ, M D

A Simple and Effective Method of Treatment in Purulent Conjunctivitis of Infants

INDIANAPOLIS, IND, March 25, 1895

To the Editor —Twenty five years of eye-practice, private, and in hospital, has given me abundant opportunity to test the relative merits of the different methods of treatment in suppurative conjunctivitis of infants

Until about one year ago it was my belief that nitrate of silver, when properly applied, was the most reliable of all medicines in this dangerous disease In my hands, as well as in those of my professional brethren with whom I am intimately acquainted, it has never failed to cure, if begun before ulceration of the cornea has taken place

To *properly apply it* does not mean to drop it into the eye, one or more times daily, as it would by such a method be too irritating, if used of sufficient strength to control the suppurative process It must be applied with a camel's hair pencil to the thoroughly everted palpebral and reflected portion of the conjunctiva, and then washed off, without suffering it to come in contact with the cornea, as strong as 10 to 40 grains to the ounce of water, according to the gravity of the case, or the profuseness of the discharge

How many physicians are there who can properly evert the lids of a newly born infant? This question can only be answered by those who have tried it To carry out this method of treatment until the case is cured, it is necessary that the physician make the application himself, once in every twenty-four hours It dare not be given over to a nurse or parent, and it has to be kept up from two to six weeks

Let us compare the above difficult but almost certain method to a more simple and easily practiced one, which was introduced by Dr X C Scott of Cleveland, who presented it to the AMERICAN MEDICAL ASSOCIATION at its last annual meeting It is as follows

Hydrastia sulph Acid boric Sodii bi-borat	āā	grs v
Tinct opii deod		ʒss
Aquæ dest		℥j
Mix and filter		

Dr Scott has the eye cleansed every twenty minutes and cold compresses applied when required He then has the above solution injected into the upper and lower conjunctival sacs, about six times a day by means of a medicine dropper with a nozzle long, smooth, and strong enough to be easily introduced beneath the upper lid without breaking Once a day he used, in addition to this, a 1 per cent solution of silver nitrate to the inner surface of the lids (He *tells me that he does not use the silver now*)

It will be seen by those who have read the discussion which followed his paper, that nearly all of the gentlemen present gave all of the credit to the silver treatment They seemed to ignore the fact that the cases got well in about one fifth of the time usual to the silver treatment alone It was my fortune to hear from Dr Scott's own lips all about this method several months before he read the paper to the society I tried it on a case a few days afterward It was a very severe one occurring in both eyes, one of which had ulceration of the cornea I gave a very grave prognosis A 20 grain solution of silver was applied to the everted conjunctivæ and the yellow root solution was given to the nurse, to be dropped into the eyes every hour afterward On visiting the hospital the next day I was surprised to find that the discharge of pus had nearly ceased I therefore simply had the yellow collyrium used every hour, for a few days, and in ten days the child was cured except the ulcer, which at this date is well and only a small opacity remains

I have treated several very bad cases since then, all of them were cured inside of two weeks All that seems to be necessary is to inject it under the lids every hour, cleanse the eyes still more often with tepid water, and use every night a little vaselin on the edges of the lids They should be watched by the physician to see that nothing goes wrong, and he should be sure to see that ulceration of the cornea did not exist before the treatment was begun

A greater boon never was given to the busy physician than this one of Dr Scott It will save many a child from blindness J L THOMPSON, M D

The Forty-sixth Annual Session of the AMERICAN MEDICAL ASSOCIATION will be held in Baltimore, Md, on Tuesday, Wednesday, Thursday and Friday, May 7, 8, 9 and 10, commencing on Tuesday, at 10 A M dental department Addresses were made by the Dean, Dr P R Taylor, the President, Dr J A Larrabee, and the Doctorate address by Dr L S McMurtry There were twenty-three awards of prizes

Kentucky School of Medicine —At the Commencement exercises of this school thirty-three graduates received their diplomas, the degrees being conferred by the President of the Board of Trustees, Mr James Helen The valedictory address was delivered by Dr H Lon Carter, in which he made feeling reference to the sad deaths of a fellow student, Mr W W Culpepper, the honored President of the Board of Trustees, Dr John A Broddus and Dr W Carroll Chapman, a member of the Adjunct Faculty of the College The Dean, Dr W H Wathen, referred to the added requirements of the Kentucky School, the present class being the first to graduate under the three-year rule; the next class being required to have attended four regular graded courses of lectures of six months each Eight prizes and medals were awarded

Alumni Association —The annual meeting of the Alumni Association of the Kentucky School of Medicine, was held in the college building The following were elected officers for the ensuing year President, Prof Henry Orendorf, Vice-Presidents, Dr Henry E Tuley, Dr Wm V Laws, Secretary-Treasurer, Dr Louis Frank Vice-Presidents from every State having more than ten graduates were then elected The graduating class were enrolled as members The Association voted to offer a medal to the first honor man in the second year class, and it was suggested that a member of the alumni deliver the address each year at the Commencement, and that an annual banquet be given the graduating class

Wishard —Dr F M Wishard, of Indianapolis, President of the Mississippi Valley Medical Association has been in the city, the guest of Dr Thos Hunt Stucky He was entertained at the Kenton Club one evening during his visit by Dr Stucky

Mitchell District Medical Society —The following papers have been promised by Louisville physicians at the meeting of this society July 5 and 6, at West Baden, Ind Some Wretched Pelvic Cases, by Ap Morgan Cartledge, Litholapaxy, by Samuel Cochran, Report of Cases, by M F Coomes, The Treatment of Corneal Ulcers, by S G Dabney, The Ocular Symptoms of Kidney Disease, by T C Evans, A Contribution to the Study of Septic Peritonitis, by Louis Frank, Advances in Infantile Therapeutics, by J A Larrabee, What Operations in Rectal Surgery are Unjustifiable? by Jos M Mathews, The Use and Abuse of the Curette in Gynecologic Practice, by L S McMurtry, Headaches, by Curran Pope, Intestinal Obstruction, with Cases, by Fouchee Samuel, Some Recent Experiences with Gold as a Therapeutic Agent, by Thos H Stucky, When to Enucleate in Traumatic Cyclitis, by P R Taylor, Vaginal Hysterectomy versus Laparotomy for Pelvic Suppuration, by Wm H Wathen

Western Insane Asylum —Dr B W Stone, Superintendent of this institution, located at Hopkinsville, recommends an addition to the asylum, especially the female department The proposed additions would cost $13,500, and Dr Stone states that part of the $350,000 which must be paid into the State treasury as a result of the bank tax decision, should be devoted to asylum improvements

Dentists —The twenty-fifth annual meeting of the Kentucky State Dental Association was held in Lexington during the past week under the Presidency of Dr Howard Van Antwerp, of Mt Sterling

Newspaper Asepsis —The following clipping from an evening newspaper speaks for itself "The condition of —— continues critical Dr ——, who attended him used a new case of instruments in removing the bullet, and h taken every precaution against blood poisoning"

Death Report —The Health Officer's mortality report f the week shows a total of 52 deaths and 2 stillbirths (these consumption caused 15, organic heart disease 5, 2 were male, 24 female, 33 white, 19 colored

Academy of Medicine —This society has adjourned unt the first Monday in September

Wathen —At the golden jubilee of the University of Notr Dame, last week, before the many distinguished gues present, a public announcement was made that the Unive sity had conferred the degree of LL D upon William I Wathen, A M, M D, in recognition of his worth as a schola teacher and doctor

THE PUBLIC SERVICES

Army Changes Official list of changes in the stations and duties officers serving in the Medical Department U S Army, from Jun 15, 1895, to June 21, 1895

Capt Marlborough C Wyeth Asst Surgeon is granted leave of al sence for two months, to take effect the latter part of August 1895

Capt George McCreery Asst Surgeon, will be relieved from duty Ft D A Russell, Wyo, and will report in person to the commandin officer, Ft Niobrara, Neb, for duty at that post

Capt Charles Richard, Asst Surgeon, is granted leave of absence f three months to take effect when he shall be relieved from his pre ent duties, on or about June 30, 1805

First Lieut William F Lewis, Asst Surgeon, is granted leave of absen for two months and twenty three days, to take effect on or abo July 6, 1895

Capt James E Pilcher Asst Surgeon, leave of absence granted on su geon's certificate of disability, is extended four months on surgeon certificate of disability, and permission is given him to go beyon sea

Navy Changes Changes in the Medical Corps of the U S Navy f the week ending June 22 1895

Medical Director A A Hoehling placed on retired list

Medical Inspector G W Woods, ordered for examination preliminar to promotion to Medical Director

Surgeons G F Winslow and R A Marmion, ordered for examinatio preliminary to promotion to Medical Inspector

Marine-Hospital Changes Official list of changes of stations an duties of medical officers of the U S Marine Hospital Service, f the fifteen days ended June 15, 1895

Surgeon George Purviance, relieved from duty at Philadelphia P (temporarily), and detailed for duty on board relating to Ford Theater disaster, June 8, 1895

Surgeon W A Wheeler detailed as chairman of board for physic examination of candidate, revenue cutter service, June 1 1895

P A. Surgeon S D Brooks, granted leave of absence for twenty day June 14, 1895

P A Surgeon J H White detailed as recorder of board for physic examination of candidate revenue cutter service, June 1 1895

P A Surgeon W J Pettus, granted leave of absence for thirty day June 6, 1895

Asst Surgeon L E Cofer, to inspect unserviceable property at San D ego Quarantine Station, June 12, 1895

Asst Surgeon H S Cumming, relieved from temporary duty at Bosto Mass, and ordered to rejoin his station at New York, N Y, June 1895

LETTERS RECEIVED

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Battle & Co, St Louis Mo, Ball Bearing Co, Boston, Mass, Bowke E M, Boston Mass Busey, S C, Washington, D C

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